4467

ENGLISH BOTANY;

OR,

COLOURED FIGURES

OF

BRITISH PLANTS,

WITH THEIR

ESSENTIAL CHARACTERS, SYNONYMS, AND PLACES OF GROWTH:

TO WHICH WILL BE ADDED,

OCCASIONAL REMARKS.

BY

JAMES EDWARD SMITH, M.D. F.R.S.

MEMBER OF THE IMP. ACAD. NATURÆ CURIOSORUM, THE ACADEMIES OF STOCKHOLM, UPSAL, TURIN, LISBON, LUND, BERLIN, PHILADELPHIA, AND THE NAT. HIST. SOCIETIES OF PARIS AND MOSCOW;
PRESIDENT OF THE LINNÆAN SOCIETY.

THE FIGURES BY
JAMES SOWERBY, F.L.S.

——"VIRESQUE ACQUIRIT EUNDO."——*Virg.*

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MDCCCVIII.

G.R. III.
BRITISH MUSEUM

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p. 1801, line 18—for 1787 read 1807.

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Oct.1.1801 Published by Jas. Sowerby London.

SCHEUCHZERIA palustris.

Marsh Scheuchzeria.

HEXANDRIA Trigynia.

GEN. CHAR. *Cal.* none. *Petals* 6. *Stigmas* sessile, lateral. *Capsules* 3, superior, inflated. *Seeds* 1 or 2. *Anthers* linear.

SPEC. CHAR. . . . .

SYN. Scheuchzeria palustris. *Linn. Sp. Pl.* 482. *Fl. Lapp. ed.* 2. 103. *t.* 10. *f.* 1. *Ehrh. Phytoph.* 24. *Fl. Dan. t.* 76. *Hall. Hist. v.* 2. 166. *Roth. Germ. v.* 2. 419.

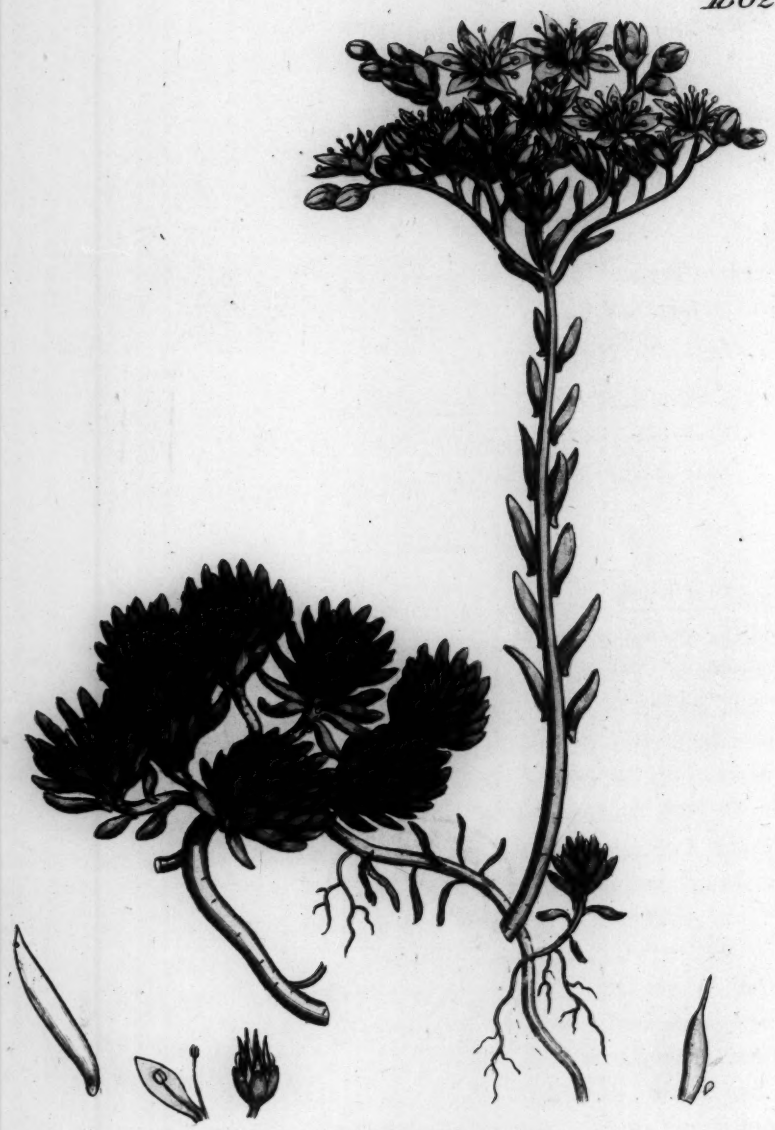
Juncoidi affinis palustris. *Scheuchz. Agr.* 336.

Gramen junceum aquaticum, semine racemoso. *Loes. Pruss.* 114. *t.* 28.

IT has now and then in the course of this work fallen to our lot to add a new genus to the Flora of Britain, and such is the plant before us, discovered by the Rev. Mr. Dalton, in June 1787, growing abundantly, along with *Lysimachia thyrsiflora*, in Lakeby Car near Borough-bridge, Yorkshire. This at least is no outcast of gardens, for we are pretty certain that no person ever attempted to cultivate it. Even on the Alps of Switzerland it is considered as extremely rare. Haller never found it, and suspected it to be lost. We have however received Swiss specimens from the late Mr. Davall. In Lapland and Norway the *Scheuchzeria* is less uncommon. It grows always in very wet spongy bogs. Linnæus named this "grassy alpine genus" after two brothers, one of whom excelled in the knowledge of grasses, the other of alpine plants. See *Crit. Bot.* 79.

The root is long, creeping, scaly, and perennial. Stems erect, simple, a span high. Leaves few, sheathing, rushy, semicylindrical, rising above the top of the stem, mostly radical, each having a pore at its point, first remarked by Mr. Dalton, through which water oozes when the leaf is compressed. Flowers in a simple, terminal, bracteated cluster, greenish brown, small and inconspicuous. Petals recurved, equal and uniform, yellowish green. Stamens slender and flaccid. Anthers brown, vertical, linear, bursting by 2 longitudinal internal pores. Germens ovate, 3, occasionally 4, 5 or 6, with lateral, sessile, oblong, downy stigmas. Capsules globose, inflated, each containing 1 or 2 roundish seeds. —The analogy of *Tofieldia*, *t.* 536, and other genera, leads us to consider this flower as having a corolla rather than a calyx, about which Linnæus is at variance with himself.

1802



Oct.1.1807. Published by Jas. Sowerby, London.

SEDUM Forsterianum.

Forsterian Stonecrop.

DECANDRIA Pentagynia.

GEN. CHAR. *Cal.* 5-cleft. *Petals* 5, with 5 nectariferous scales at the base of the germen. *Capsules* 5, superior.

SPEC. CHAR. Leaves thick, awlshaped, clustered together in many rows, spreading, loose at the base. Flowers in a cyme. Segments of the calyx short and rounded.

GATHERED in 1806, by E. Forster junior, Esq., on a rock at the fall of the Rhydoll, near the Devil's-bridge, Cardiganshire. The root brought from thence flowered this year, in the month of July, in Mr. Forster's garden, to whom we are obliged for specimens, as well as for the detection of this new species, hitherto confounded with *S. rupestre*, *t.* 170. Mr. Griffith, having never found the latter in Wales, suggests that our *S. Forsterianum* is probably what Dr. Richardson and Mr. Llwyd gathered "on rocks overhanging the little valley of Nant-phrancon," as recorded in *Raii Syn.* 270, which has hitherto been supposed the *S. rupestre*.

Our *Sedum* differs from *rupestre* in having the leaves of the barren branches spreading in a rosaceous form, not close-pressed or erect, and especially in the want of a glaucous hue in the leaves, stem and calyx. The petals also are more elliptical and blunt. The segments of the calyx in both these species are short, rounded and obtuse; in *S. reflexum* they are longer, lanceolate and acute, which we confess is not quite so well expressed in our *t.* 695 as it might have been. The petals of the latter are, moreover, pointed likewise, as that figure represents them.

Oct.1.1807. Published by Ja.s Sowerby London.

THLASPI hirtum.

Hairy Mithridate Mustard.

TETRADYNAMIA Siliculosa.

GEN. CHAR. *Pouch* notched, inversely heart-shaped, with several seeds: valves boat-like, their keels forming the border: partition contrary to the valves.

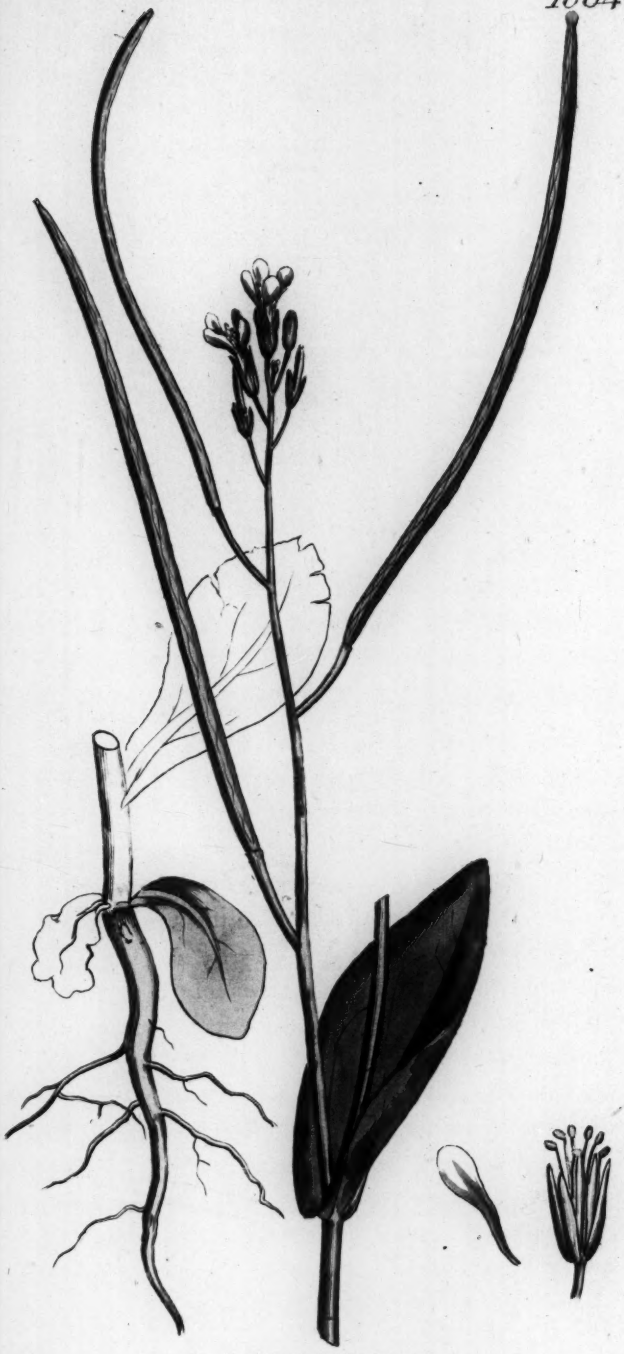
SPEC. CHAR. Pouch elliptic-oblong, often hairy, bordered at the upper part. Stem-leaves arrow-shaped, hoary. Style elongated.

SYN. Thlaspi hirtum. *Linn. Sp. Pl.* 901. *Sm. Fl. Brit.* 684.

T. vaccariæ incano folio perenne. *Raii Syn.* 305, *ed.* 2. 175.

CONFIDING in the accuracy of Ray, I could not but admit this plant into the *Flora Britannica*, though Hudson's *T. hirtum* was proved, by an authentic specimen, to be only *campestre* with hairy fruit. In 1800 Mr. J. Mackay sent me the true plant from Perthshire, found by Mr. Miller; and the following year I received a variety with smooth fruit, gathered in Perthshire and Angusshire by Mr. G. Donn. At length fresh wild specimens, but with smooth fruit likewise, discovered by the Rev. G. R. Leathes at Browston, Suffolk, have been sent Mr. Sowerby.

This species differs from *T. campestre*, *t.* 1385, in having a perennial woody root, more oblong and less tumid pouches, whose sides are often very hairy, and when destitute of hairs are but obscurely dotted, never so scaly as in that species. The petals also are much larger, and more conspicuous. But for a new and decisive mark I am obliged to Mr. Leathes, who justly observes that the elongated style, projecting far beyond the lobes of the pouch, will always distinguish this plant from the *campestre*, whose short style is just equal to those lobes. Being perennial, the *hirtum* flowers in June, a month or 6 weeks before the other.



Oct.1.1804. Published by Jas. Sowerby, London

BRASSICA orientalis.

Hare's-ear Cabbage.

TETRADYNAMIA Siliquosa.

GEN. CHAR. *Cal.* erect, partly cohering. *Seeds* globular. *Pod* nearly cylindrical; the partition prominent, awl-shaped. *Glands* 4.

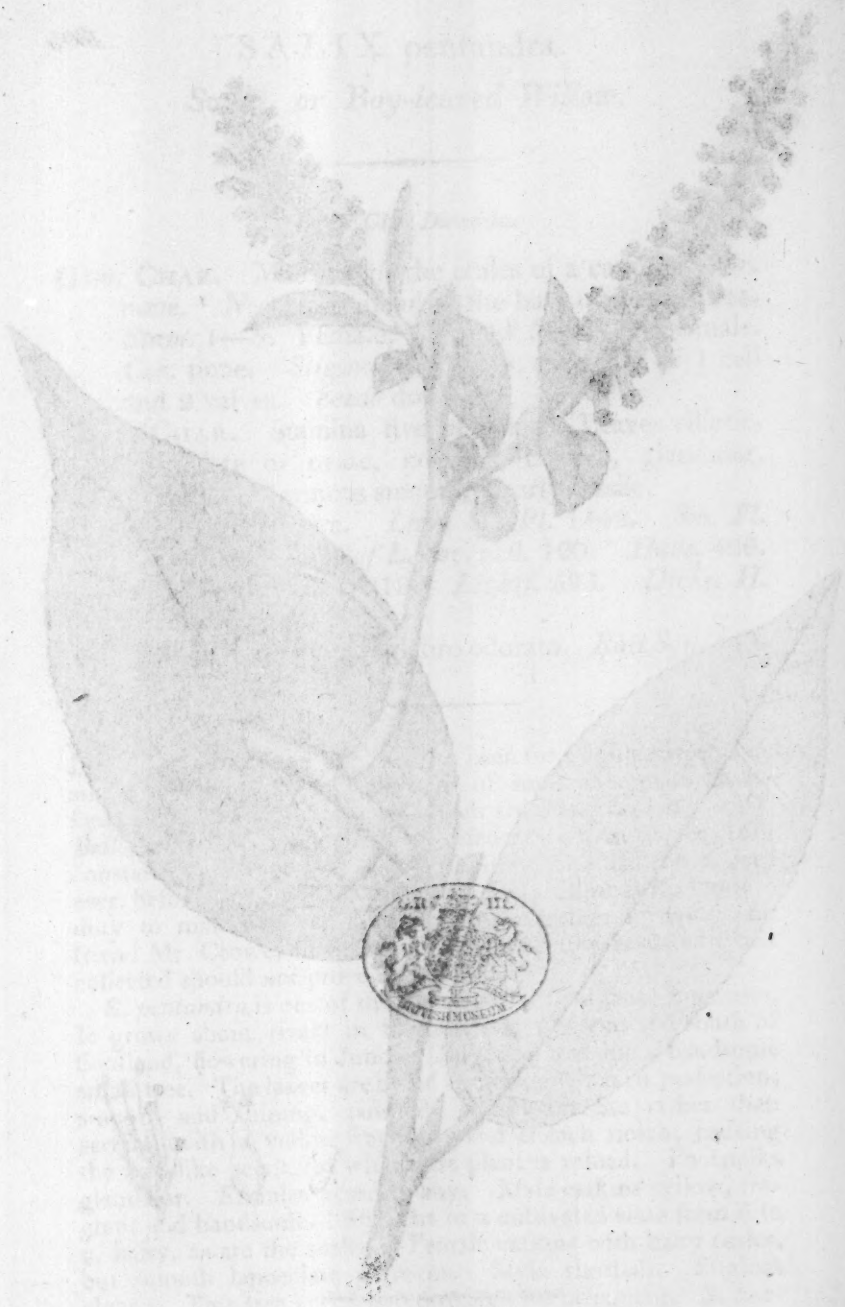
SPEC. CHAR. Leaves elliptic-heartshaped, obtuse, clasping the stem; the radical ones obovate and undivided; all smooth and entire. Pods square.

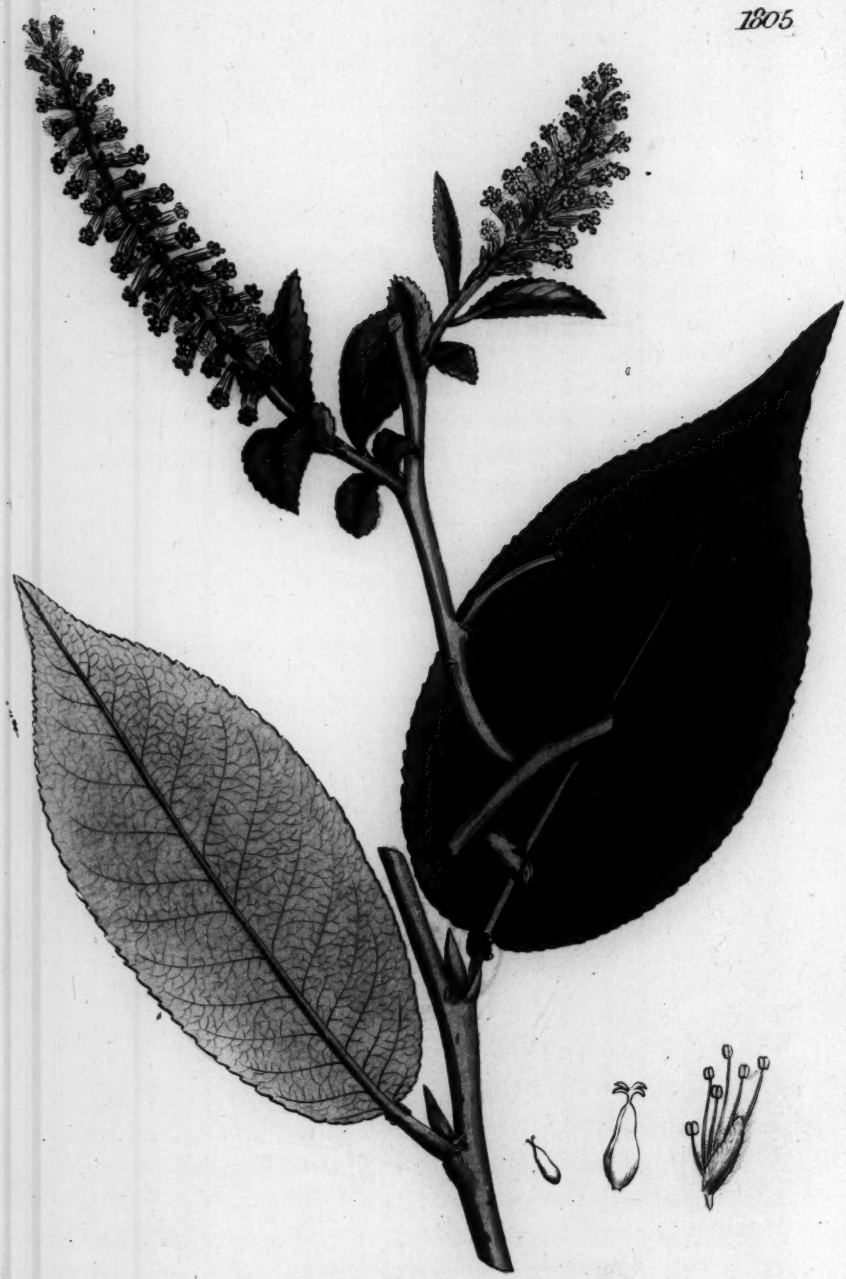
SYN. Brassica orientalis. *Linn. Sp. Pl.* 931. *Sm. Fl. Brit.* 717. *Huds.* 290. *With.* 589. *Hull.* 147. *Pollich. v.* 2. 247. *Jacq. Austr. t.* 282.

B. campestris perfoliata, flore albo. *Dill. in Raii Syn.* 293.

THIS is chiefly found in fields near the sea, and on the very cliffs about the coast, especially in Essex and Sussex. Our specimen came from Mr. Hooker's garden, Norwich. It is annual, flowering in June or early in July.

Root small, tapering, white. Stem mostly simple, erect, leafy, round, glaucous, from one to two feet high. Radical leaves obovate, spreading; those on the stem alternate, elliptical, with a heartshaped clasping base; all glaucous, smooth, obtuse and entire. Flowers cream-coloured, in a simple dense corymbus, afterwards lengthened out into a long cluster of very long square pods. Pollich justly remarks that the leaves are all smooth, and Linnæus has confirmed it, though in his *Syst. Veg.*, edited by Murray, the original error, *foliis radicalibus scabris*, is allowed to remain within two lines of the correction. Perhaps this error led Hudson to confound this species with *B. campestris*, for which he erroneously quotes Jacquin's *B. austriaca*. The latter is rather a variety of *orientalis*, having nothing to do with *campestris*.





Oct.1.1807. Published by Jas. Sowerby London.

SALIX pentandra.

Sweet, or Bay-leaved Willow.

DIOECIA Diandria.

GEN. CHAR. Male, *Cal.* the scales of a catkin. *Cor.* none. *Nectary* a gland at the base of the stamina. *Stam.* 1—5. Female, *Cal.* and *Nect.* like the male. *Cor.* none. *Stigmas* 2. *Caps.* superior, of 1 cell and 2 valves. *Seeds* downy.

SPEC. CHAR. Stamina five or more. Leaves elliptic-lanceolate or ovate, pointed, crenate, glandular, smooth. Germens smooth, nearly sessile.

SYN. Salix pentandra. *Linn. Sp. Pl.* 1442. *Sm. Fl. Brit.* 1046. *Tr. of L. Soc. v.* 6. 120. *Huds.* 426. *With.* 46. *Hull.* 218. *Lightf.* 595. *Dicks. H. Sicc. fasc.* 3. 15.

S. folio laureo, seu lato glabro odorato. *Raii Syn.* 449.

MY attention to the Willows has been for a while suspended, and I return to the consideration of such as remain to be figured in this work, among which are many not in the *Fl. Brit.*, with that reluctance and diffidence which the loss of a constant companion and fellow-labourer, who had the subject ever before him, cannot fail to excite. It now becomes a duty to make known the unpublished remarks of my late friend Mr. Crowe, and to take care that the treasures he had collected should not prove useless.

S. pentandra is one of the species most familiar to botanists. It grows about rivers in the north of England and south of Scotland, flowering in June or July, and forming a handsome small tree. The leaves are broad and ovate when in perfection, smooth and shining, pointed, closely crenate rather than serrate, with a yellow fragrant gland at each notch, causing the bay-like scent for which the plant is valued. Footstalks glandular. Stipulas scarcely any. Male catkins yellow, fragrant and handsome. Stamens in a cultivated state from 6 to 9, hairy, as are the scales. Female catkins with hairy scales, but smooth lanceolate germens. Style shortish. Stigmas cloven. This tree is chiefly cultivated for ornament. *S. hexandra* of Ehrhart is very different, having narrow leaves.

GR III

Oct.1.1807. Publish'd by Jas. Sowerby London.

SALIX bicolor.

Shining Dark-green Willow.

DIOECIA Diandria.

GEN. CHAR. Male, *Cal.* the scales of a catkin. *Cor.* none. *Nectary* a gland at the base of the stamina. *Stam.* 1—5. Female, *Cal.* and *Nect.* like the male. *Cor.* none. *Stigmas* 2. *Caps.* superior, of 1 cell and 2 valves. *Seeds* downy.

SPEC. CHAR. Leaves elliptical, acute, waved and slightly serrated, nearly smooth; glaucous beneath. Germens stalked, lanceolate, silky.

SYN. Salix bicolor. *Ehrh. Arb.* 118. *Sm. Fl. Brit.* 1048. *Winch Bot. Guide, v.* 1. 89.

S. laurina. *Sm. Tr. of L. Soc. v.* 6. 122.

OBSERVED by Mr. Crowe to be not unfrequent in woods in Norfolk. Cuttings of it were taken indiscriminately from thence along with *S. caprea, t.* 1488, to plant for the purpose of making hurdles; but the unfitness of the species before us for that use, led to a discovery of their difference. Indeed nothing but the botanical inattention which the whole genus has so long experienced, could have occasioned two such different species to be confounded.

S. bicolor grows in an upright wand-like form when young, and is known by its dark mahogany-coloured stems, and the upright stiff position of its leaves. If neglected, it forms a small tree. The leaves are large, elliptical, acute, waved and obscurely serrated or toothed, nearly smooth; dark shining green above; glaucous beneath. Stipulas small, half heart-shaped, serrated. Footstalks broad at the base. Female catkins an inch long when in full flower, but soon becoming twice as long. Scales rounded, very hairy. Germen lanceolate, stalked, silky. Style short, with roundish, notched stigmas. The male I have only seen in Ehrhart's dried specimen, which appears to be certainly the same species, and I adopt his name with the more pleasure, as it is more apt than what I had given already.

G.R. III.

Nov. 1. 1807. Published by Jas. Sowerby, London.

SALIX fragilis.

Crack Willow.

DIOECIA Diandria.

GEN. CHAR. Male, *Cal.* the scales of a catkin. *Cor.* none. *Nectary* a gland at the base of the stamina. *Stam.* 1—5. Female, *Cal.* and *Nect.* like the male. *Cor.* none. *Stigmas* 2. *Caps.* superior, of 1 cell and 2 valves. *Seeds* downy.

SPEC. CHAR. Leaves ovato-lanceolate, pointed, serrated throughout, very smooth. Footstalks glandular. Germen ovate. Male flowers with an abortive germen.

SYN. Salix fragilis. *Linn. Sp. Pl.* 1443. *Sm. Fl. Brit.* 1051. *Huds.* 426. *With.* 47. *Hull.* 218. *Relh.* 385. *Sibth.* 16. *Abbot.* 212. *Dicks. H. Sicc. fasc.* 16. 5.

S. folio longo latoque splendente, fragilis. *Raii Syn.* 448. *Cant.* 143. *n.* 3.

NOT unfrequent in low marshy grounds, about the banks of rivers, flowering in May. Several trees of this species are to be seen at Mill-bank, Westminster, and other parts of that neighbourhood. The name alludes to its extreme brittleness, in the spring, at the base of the young branches, which, with the slightest blow, start from the trunk. This circumstance however is observable in several other smooth willows.

S. fragilis forms a large bushy tree, remarkable for the crooked position of its branches, and its large, broad, dark and shining leaves, which incline to an ovate figure when fully grown, being more or less rounded towards the base. Their serratures are numerous, uniform and regular, a little incurved, glandular, but scarcely viscid. Footstalks glandular at the top. Stipulas half-heartshaped, toothed. Catkins in separate buds from the leaves, on shortish leafy stalks. The male ones yellow, with rounded hairy scales. Stamina from 2 to 5, smooth, with a rounded nectary, and an incurved abortive germen. Female scales longer. Germen inclining to ovate, smooth, the length of the scale, nearly sessile. Stigmas cloven to the base, narrow. Style short.

We are now well acquainted with *S. decipiens* of Hoffmann, and find it very different from this.

Nov.1.1809. Published by Jas. Sowerby London.

SALIX Russelliana.

Bedford Willow.

DIOECIA Diandria.

GEN. CHAR. Male, *Cal.* the scales of a catkin. *Cor.* none. *Nectary* a gland at the base of the stamina. *Stam.* 1—5. Female, *Cal.* and *Nect.* like the male. *Cor.* none. *Stigmas* 2. *Caps.* superior, of 1 cell and 2 valves. *Seeds* downy.

SPEC. CHAR. Leaves lanceolate, tapering at each end, serrated throughout, very smooth. Footstalks glandular. Germen tapering, stalked, longer than the scales.

SYN. Salix Russelliana. *Sm. Fl. Brit.* 1045.

GREAT disputes have arisen respecting this Willow since the late Duke of Bedford first brought it into notice for its tall quick growth and valuable properties, and the late Mr. Biggin, under his Grace's patronage, ascertained its bark to be peculiarly good for tanning. The present Duke has also paid great attention to it. We are obliged to him for living plants, and some remarks concerning the differences of opinion above alluded to. It was first made known by the name of the Leicestershire or Dishley Willow, being supposed peculiar to that neighbourhood; but it is found throughout the midland and southern counties, being in fact what is often taken for *S. fragilis*, by which name it was known to many cultivators, who had not discovered its merits, and who, when those merits were published, made light of them, because they already knew the plant. The excellent author of the *Bedford Flora* was one of the first botanists who ascertained these species to be distinct.

The whole hue of *S. Russelliana* is lighter than that of *fragilis*, especially the leaves, which are also more firm, and narrower, tapering at the base, and not rounded, or ovate; their serratures are more coarse and irregular; mid-rib much stouter. The glands of the footstalks sometimes become leaflets. Germen longer than the scale, more tapering and awlshaped than the last, with a longer stalk and style. The male plant we have not seen.

Nov 1 1807. Published by Ja.s Sowerby, London.

SALIX arenaria.

Downy Mountain Willow.

DIOECIA Diandria.

GEN. CHAR. Male, *Cal.* the scales of a catkin. *Cor.* none. *Nectary* a gland at the base of the stamina. *Stam.* 1—5. Female, *Cal.* and *Nect.* like the male. *Cor.* none. *Stigmas* 2. *Caps.* superior, of 1 cell and 2 valves. *Seeds* downy.

SPEC. CHAR. Leaves nearly entire, ovate, acute; reticulated and somewhat downy above; very woolly and veiny beneath.

SYN. Salix arenaria, *Linn. Sp. Pl.* 1447. *Fl. Lapp. ed.* 2. 298. *t.* 8. *f.* o, q. *Sm. Fl. Brit.* 1058. *Galp. Comp.* 83.

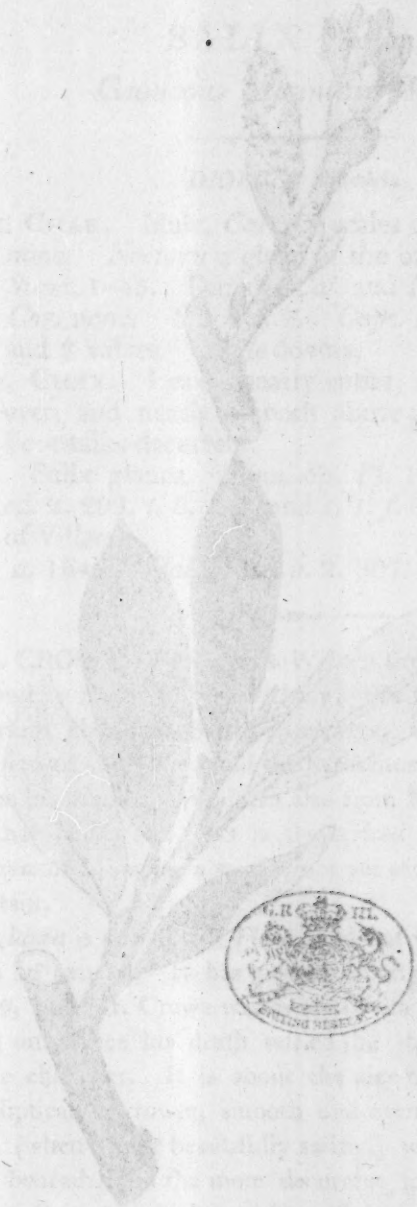
S. lapponum. *Lightf.* 604. *Huds.* 651. *With.* 51. *Hull.* 218.

S. n. 20. *Gmel. Sib. v.* 1. 164. *t.* 36. *f.* 1. *Herb. Linn.*

S. helvetica. *Villars Dauph. v.* 3. 783, but not Haller's *t.* 14.

DISCOVERED on the mountains of Breadalbane by the Rev. Dr. Stuart, who communicated it to Mr. Lightfoot. The latter, taking it for the *lapponum* of Linnæus, compiled a description from *Fl. Lapp.* which does not apply to the present plant. The original cause of this confusion was Gmelin, who assured Linnæus that the figure of Dillenius in Ray's *Synopsis*, *t.* 19. *f.* 3, was the Linnæan *S. arenaria*; how erroneously, may be seen by turning to our *argentea*, *t.* 1364, which is Dillenius's plant. Villars mistakes the *arenaria* for Haller's *t.* 14, which is *glauca*; see *t.* 1810.

S. arenaria is a stout, branched, bushy shrub, 2 or 3 feet high, flowering in May, with reddish-brown, slightly downy, twigs. The down is cottony and depressed. Leaves but little spreading, ovate, acute, entire or slightly waved, somewhat revolute; dark green, reticulated with sunk veins, and clothed with thin cottony down above; very white and woolly, with prominent veins, beneath. Stipulas none. Footstalks broad at the base, not decurrent. Flowering buds very large, gibbous. Catkins ovate, soon becoming cylindrical, hairy. Stamens smooth. Capsules (from exotic specimens) woolly, nearly sessile. Style long, slender, with slender, deeply cloven, stigmas.—Dr. Stuart's male plant with narrower leaves, described in *Fl. Brit.*, is a remarkable variety, if not a distinct species, approaching to the true *S. lapponum*.



Nov. 1.1807. Published by Ja.s Sowerby London.

SALIX glauca.

Glaucous Mountain Willow.

DIOECIA Diandria.

GEN. CHAR. Male, *Cal.* the scales of a catkin. *Cor.* none. *Nectary* a gland at the base of the stamina. *Stam.* 1—5. Female, *Cal.* and *Nect.* like the male. *Cor.* none. *Stigmas* 2. *Caps.* superior, of 1 cell and 2 valves. *Seeds* downy.

SPEC. CHAR. Leaves nearly entire, elliptic-lanceolate; even and nearly smooth above; woolly beneath. Footstalks decurrent.

SYN. Salix glauca. *Linn. Sp. Pl.* 1446. *Fl. Lapp. ed.* 2. 299. *t.* 8. *f.* p. and *t.* 7. *f.* 5: but not *sericea* of Villars.

S. n. 1642. *Hall. Hist. v.* 2. 307. *t.* 14.

MR. CROWE received this Willow from the Highlands of Scotland by favour of Mr. Dickson. We find in Mr. Davall's herbarium abundant Swiss specimens, which prove it the plant figured in Haller, and the herbarium of Linnæus shows it to be his *glauca*. We learn also from Mr. Davall's collection that Haller's *n.* 1643 is the *sericea* of Villars, and the *lapponum* of Linnæus, a species not yet ascertained as a native of Britain.

S. glauca is new to our *Flora*, and not well known to botanists in general. It has passed among us for a variety of *t.* 1809, but Mr. Crowe was aware of its difference, though I have only since his death settled the above synonyms and specific character. It is about the size of *S. arenaria*, but the elliptical, narrower, smooth and even leaves, peculiarly white, (when young beautifully satiny,) with less prominent veins, beneath, and the more decurrent footstalks, evidently distinguish it; to which may be added that the stigmas are shorter and thicker, and that we have occasionally noticed convex rounded stipulas, not observed in the other. It blossoms in May, rather after *S. arenaria*.

Nov.1.1807. Publish'd by Jas. Sowerby London.

OPEGRAPHA vulgata.

Common Opegrapha.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* in black, linear, sessile, simple or branched, bordered *clefts*, in an uninterrupted crust.

SPEC. CHAR. Crust thin, indeterminate, greenish grey, somewhat scaly. Clefts small, linear, divaricated, zigzag, simple or branched, with a thick edge and very narrow disk.

SYN. Opegrapha vulgata. *Ach. Meth.* 21.

Lichen vulgatus. *Ach. Prod.* 21; synonyms all perhaps erroneous.

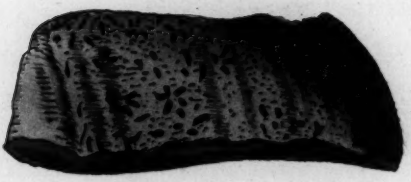
A VERY common *Opegrapha*, generally overlooked as a bad or imperfect state of the more elegant species. It grows chiefly in the clefts and hollows of the bark of old trees, especially fir.

The crust is indeterminate, but sufficiently evident, running in small irregular blotches, of a greenish pale grey, its surface roughish or scaly, in our specimens often sprinkled with little black dots or warts, perhaps young or abortive fructification. Clefts numerous, scattered and divaricated in all directions, never parallel; they are small, zigzag, of various lengths, simple or branched, having a narrow disk and thick inflexed border. In Dr. Acharius's own specimens the fructification is often branched, and we are inclined to think that few species of *Opegrapha* have truly simple clefts, which Mr. Turner also has hinted to us.

Dr. Acharius seems doubtful whether this may be the *Lichen rugosus* of Linnæus. No doubt many things were confounded by that great man under this as well as other intricate cryptogamic species, but we rather presume *O. epiphega* to be his *L. rugosus*. We have not however examined what Dillenius's *t.* 18. *f.* 2. precisely represents.

G.R. III.

1812



Nov.1.1807. Published by Ja.s Sowerby, London.

OPEGRAPHA elegans.

Elegant Grooved Opegrapha.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* in black, linear, sessile, simple or branched, bordered *clefts*, in an uninterrupted crust.

SPEC. CHAR. Crust orbicular, granulated, white, somewhat shining. Clefts immersed, scattered, divaricated, mostly simple, with a grooved border.

DISCOVERED by Mr. W. Borrer in Sussex, on the smooth bark of young trees.

The crust is several inches broad, circular and uninterrupted, white and somewhat polished, not at all mealy, but finely granulated all over with little regular protuberances. Clefts scattered, divaricated in every direction, shortish, straight, mostly simple, though not invariably so. They project but little above the crust, accompanied by a slight accessory border, which sometimes, as in other species, turns back. Their proper border is peculiar, being marked with a deep uninterrupted longitudinal furrow on both sides of the disk, which latter is very narrow.

This species cannot be referred to any in the works of Acharius, rich and ample as they are, and we have given it a name chosen by Mr. Borrer, which it well deserves.

Nov. 1.1807. Published by Jas Sowerby London.

OPEGRAPHA scripta.

Black-letter Opegrapha.

CRYPTOGAMIA Algæ.

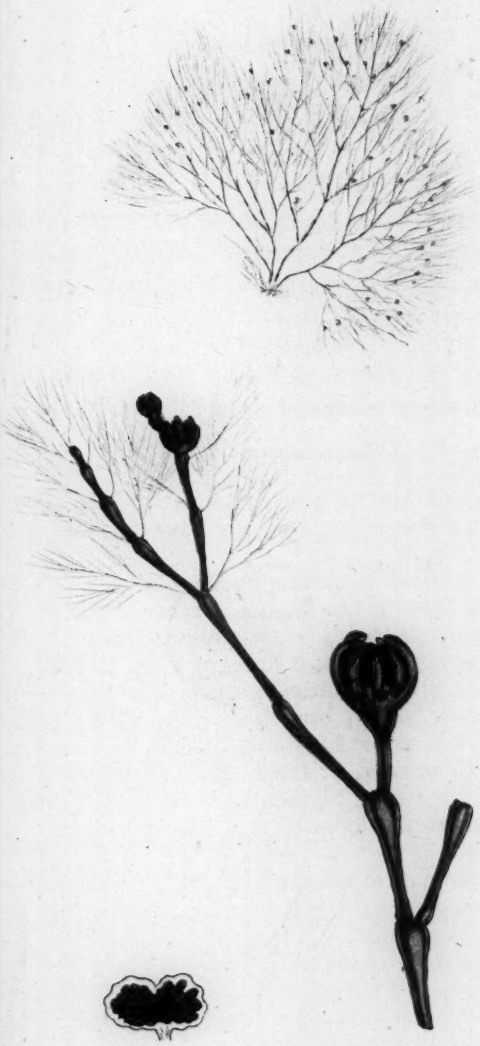
GEN. CHAR. *Seeds* in black, linear, sessile, simple or branched, bordered *clefts*, in an uninterrupted crust.

SPEC. CHAR. Crust thin, membranous, shining, smooth, greenish-white, bordered with black. Clefts immersed, smooth, linear, slightly zigzag, simple, or much branched in a parallel direction.

SYN. Opegrapha scripta. *Ach. Meth.* 30.
Lichen scriptus. *Ach. Prod.* 25. *Linn. Sp. Pl.* 1606. *Huds.* 523. *With. v.* 4. 4. *Hull.* 284. *Relh.* 446. *Sibth.* 316. *Abbot.* 257. *Lightf.* 800.
Lichenoides crusta tenuissima, peregrinis velut litteris inscripta. *Dill. in Raii Syn.* 71. *Musc.* 125. *t.* 18. *f.* 1?

IN the history of the genus *Opegrapha* this species, under which most of the rest have been confounded, deserves peculiar notice. It is not uncommon on the smooth barks of trees in woods, but does not obtrude itself upon every rugged exposed stump in the highways like some others.

The crust is broad, continued, thin, even, smooth and polished, of a greenish or brownish white, with a blackish edge. Fructification scattered, so much resembling Hebrew or Chinese characters that one is disposed to think some antiquary of quick genius and fertile fancy might read in them legends of other times, and perhaps compose a fairy *ogham* or alphabet by their means. To the botanist their generally numerous and complicated branches, always disposed more or less in a parallel manner, the linear form of each, with a broad smooth disk, and narrow border, express very intelligibly the distinctive character of the species. See *O. pulverulenta, t.* 1754.



Nov. 1 1807 Published by Jas. Sowerby London.

CONFERVA barbata.

Bearded Red Conferva.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

SPEC. CHAR. Pale crimson, repeatedly branched. Joints swelling upwards, five times as long as broad; the upper ones beset with opposite, branched, pale fibres. Lateral shoots bearing tufts of simple filaments, enfolding many seeds imbedded in mucus.

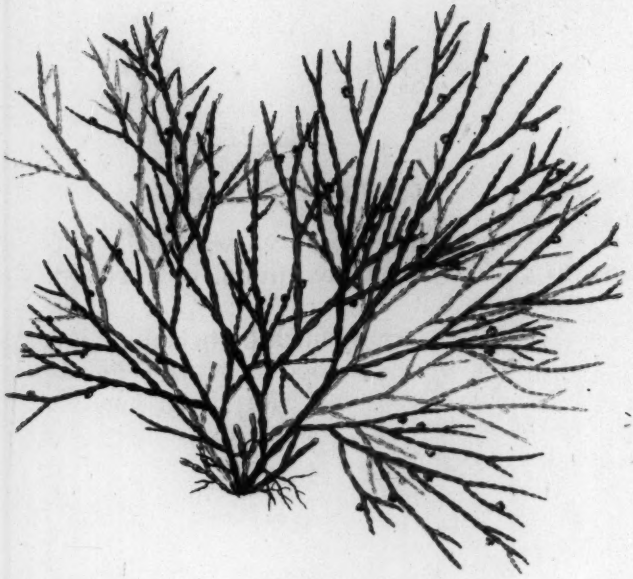
SYN. Conferva florifera. *Ellis in Phil. Trans. v.* 57. 425? No description nor figure.

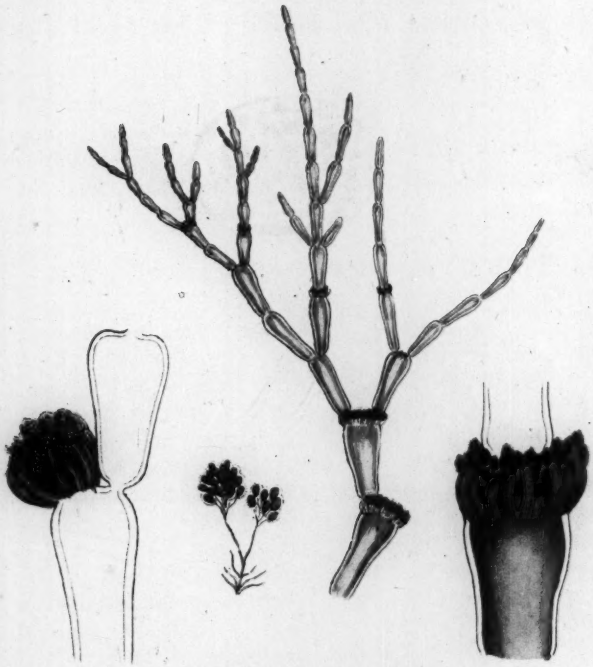
FOUND on the beach at Brighthelmston, in July 1807, by Mr. W. Borrer, of whose remarks we have profited in the following description.

The fronds are about 2 or 3 inches high, of a pale rose-colour, repeatedly branched or forked at most of the articulations, the lowermost branches especially divaricated. Joints a little swelling upwards, 5 or 6 times as long as broad, the lower ones more exactly cylindrical; those about the summit bearded with opposite, long, branched, pale, very fine fibres. Fructification at the ends of short, lateral, single-jointed branches, as in *C. setacea*, *t.* 1689, consisting of rosaceous tufts of inflexed unjointed filaments, enfolding a mass of dark-red, globular seeds, lodged in a colourless mucus or jelly.

We have not been able to refer this to any described species, even in the rich history of the genus in Dr. Roth's *Catalecta*, *v.* 3, just come to our hands. Though much smaller in all its parts, and distinguished by the pale filaments about the upper parts of the branches, it bears considerable affinity to *C. setacea* above mentioned. Miss Biddulph has recently made some curious observations on the fructification of the latter, which appears to be of two kinds. In one the seeds are ranged singly along the little tufted jointed filaments, each accompanied by two bristles; in the other each filament bears, near its base, an oval congeries of small dots in several rows. Considering the varying fruit of some *Fuci*, see *t.* 1242, we cannot say whether these are monoecious flowers, or only the same flower in different stages.

G.R. III.





Nov. 1.1807. Published by Jas. Sowerby London.

CONFERVA corallina.

Coralline Red Conferva.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

SPEC. CHAR. Crimson, much branched. Joints swelling upwards, thrice as long as broad; the fertile ones fringed at the summit with short, incurved, simple filaments, enfolding numerous clustered seeds, imbedded in mucus.

SYN. Conferva corallina. *Linn. Syst. Veg. ed.* 14. 973. *With.* 136. *Hull.* 333. *Lightf.* 988. *Roth. Catal. v.* 3. 225.

C. corallinoides. *Linn. Sp. Pl.* 1636. *Huds.* 598.

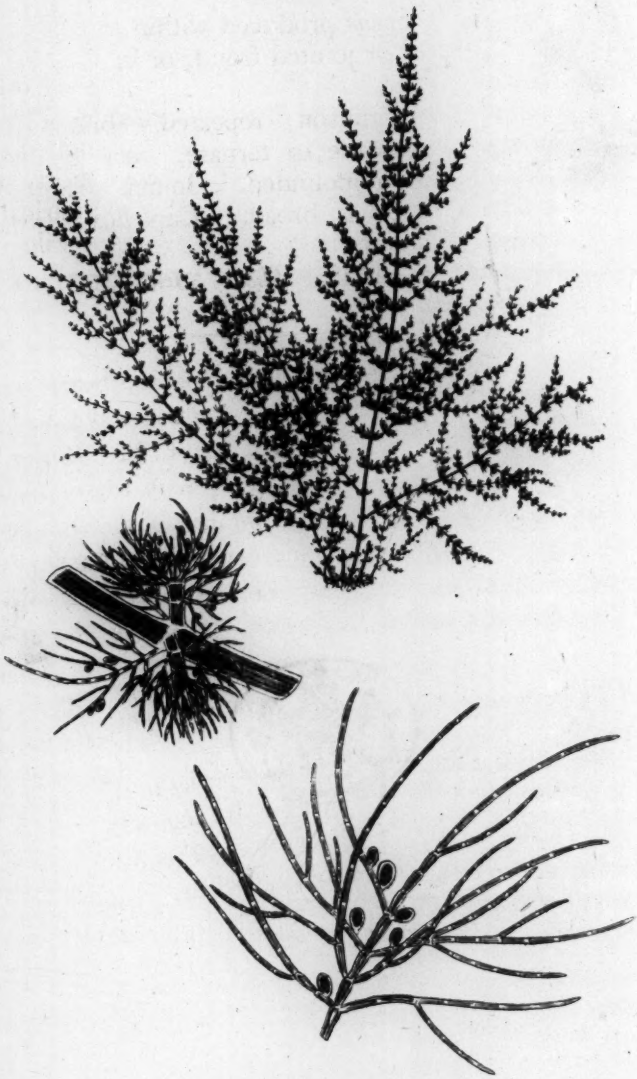
C. geniculata. *Ellis in Phil. Trans. v.* 57. 425. *t.* 18. *f.* f. F.

C. marina gelatinosa, corallinæ instar geniculata crassior. *Dill. Musc.* 33. *t.* 6. *f.* 36.

Corallina confervoides gelatinosa alba, geniculis crassiusculis pellucidis. *Dill. in Raii Syn.* 34.

GATHERED on Brighthelmston beach in July by Mr. W. Borrer.

The fresh plant is of a beautiful crimson, but turns whitish, or greenish brown, in drying. Root fibrous. Frond 2 or 3 inches high, repeatedly but irregularly branched, much thicker than the last, being about half a line in diameter. Joints about thrice as long as broad, almost pearshaped; the fertile ones either fringed all round their summits with short, unequal, inflexed, unjointed filaments, or crowned laterally with a tuft of such filaments: in either case the frond is continued beyond them, repeatedly fructifying in the same manner. Mr. Borrer has generally, not always, found the lateral fruit on a separate plant from such as surrounds the stem. The copious deep-crimson seeds, in branched clusters imbedded in jelly, are lodged within the circle of short filaments, and turn green when dried. The jelly is thought by Mr. Borrer to be more or less perceptible, according as the seeds are more or less advanced.



Novr 1807 Published by Jas Sowerby London.

CONFERVA multifida.

Tufted Red Conferva.

CRYPTOGAMIA Algæ.

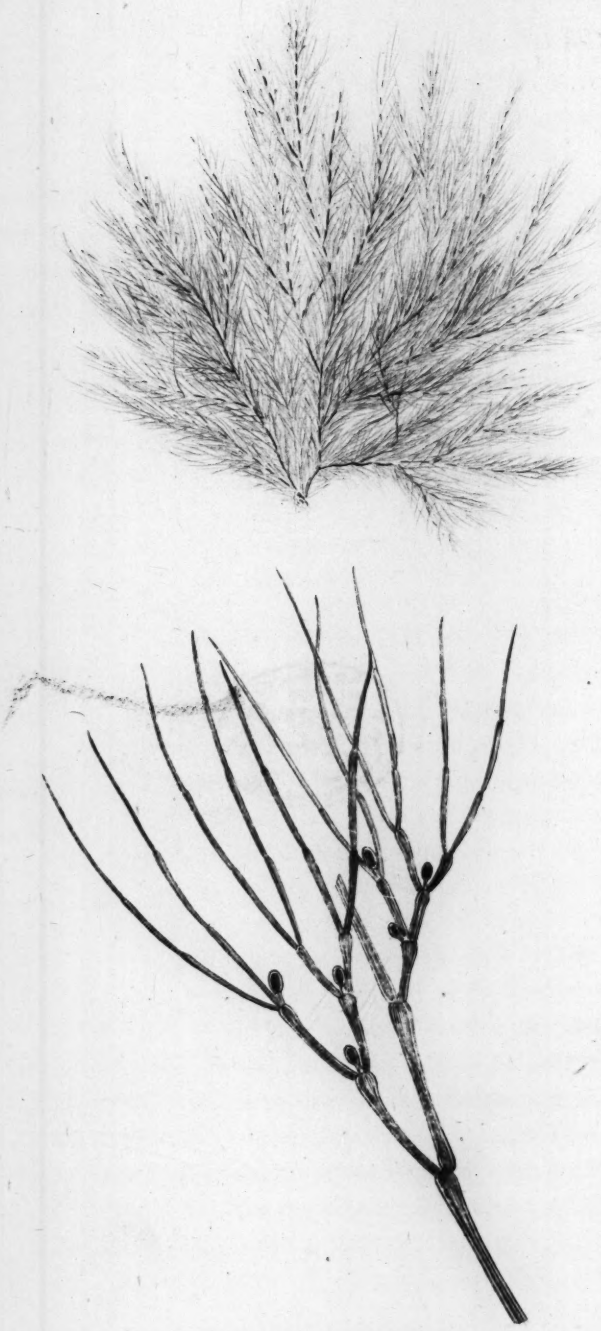
GEN. CHAR. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

SPEC. CHAR. Crimson, repeatedly branched: little branches opposite or ternate, very short, tufted, alternately compounded. Joints cylindrical, four times as long as broad. Capsules sessile on the tufted branches.

SYN. Conferva multifida. *Huds.* 596. *With. v.* 4. 132. *Hull.* 331.

OBSERVED by Mr. W. Borrer on the beach near Newhaven, Sussex, July 1, 1807, and several times since at Brighthelmston. We presume, with Mr. Borrer, that it must be *C. multifida* of Hudson, with whose description it agrees in every point, though we have never seen any specimen of Hudson's plant under his own authority or that of any of his correspondents, nor does any other person than himself appear to have described or known the species before us. Mr. Borrer's observations upon it are to the following effect.

The appearance of this species in the water is similar to that of *C. byssoides*, *t.* 547. Its hue a full, but very fugacious rose-colour. Root fibrous. Fronds several, 4 or 5 inches long, about as thick as horsehair. Branches mostly opposite, unequal, spreading almost at right angles, variously subdivided. Joints all exactly cylindrical, those of the main stem and branches full 4 times as long as broad. From each articulation of the stem and branches spring 2 or 3 opposite dense short tufts of little branches alternately subdivided, their divisions acute, ascending, incurved, jointed, the principal ones bearing on their upper side, near the base, one or more sessile roundish dark-red capsules, or seeds, for we cannot tell whether their internal structure be simple or compound.



Nov. 1817. Published by Jas. Sowerby London.

CONFERVA pedicellata.

Fruit-stalked Purplish Conferva.

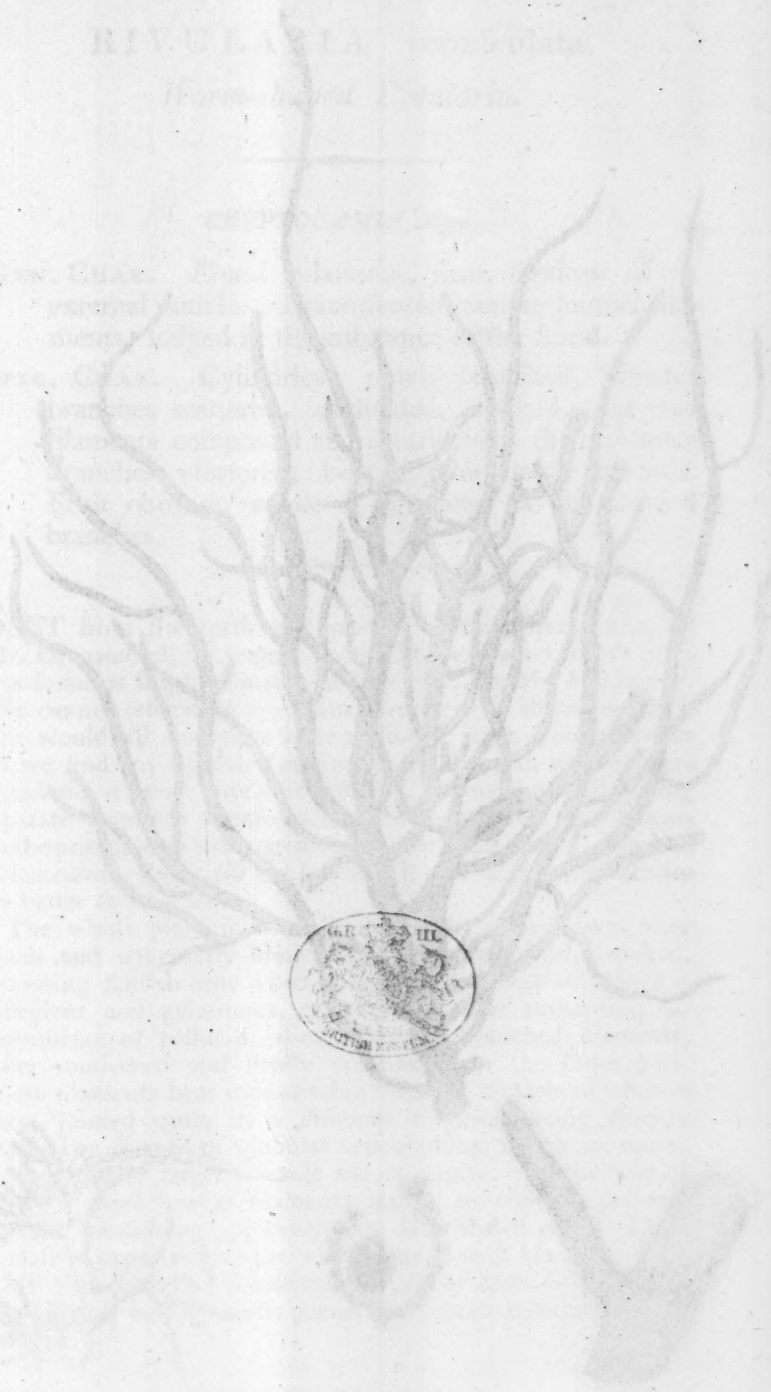
CRYPTOGAMIA Algæ.

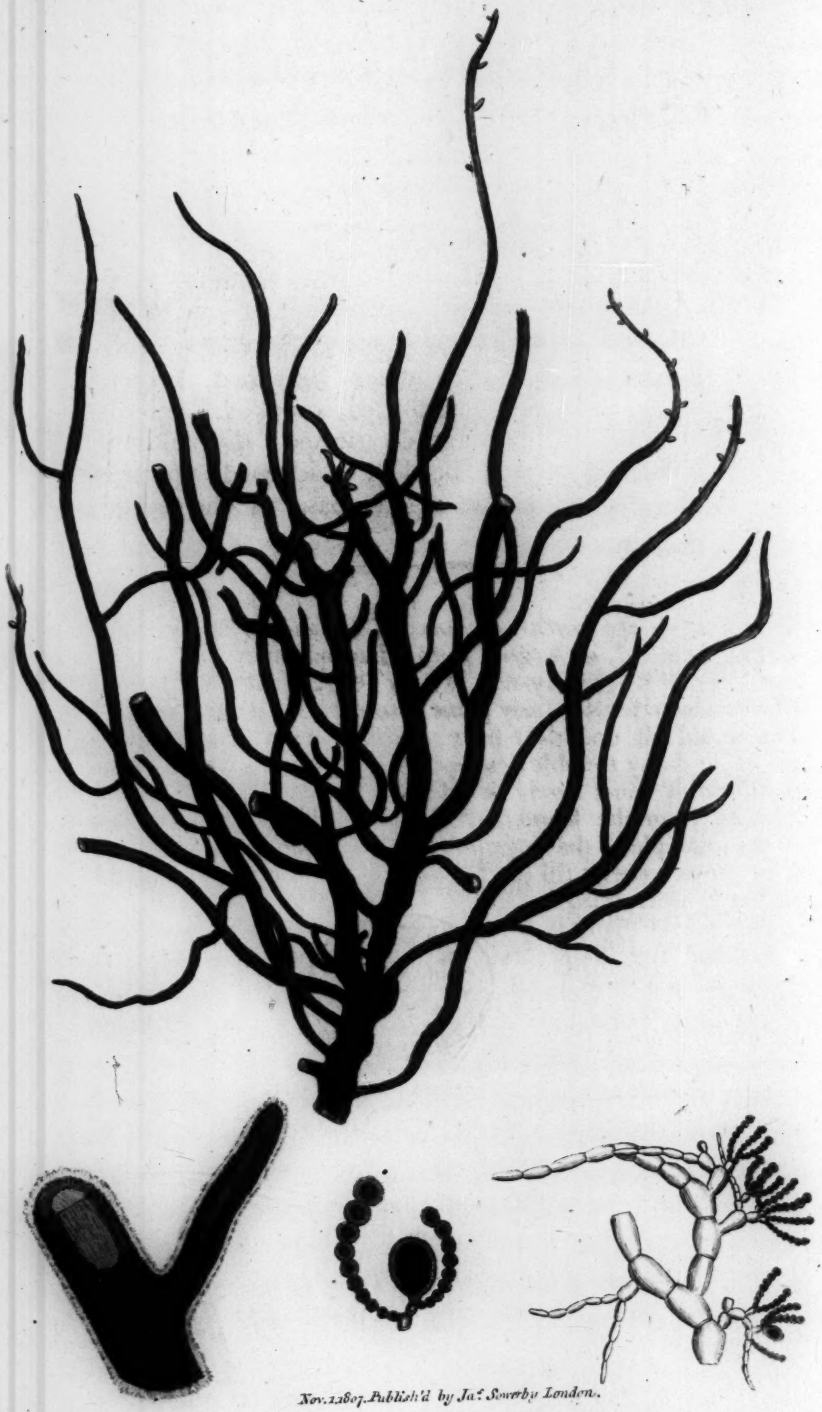
GEN. CHAR. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

SPEC. CHAR. Purplish, much branched, forked, capillary. Joints many times longer than broad, slightly swelling upwards. Capsules obovate, on short stalks, solitary, from the forks of the branches.

FOR this also we are entirely obliged to Mr. W. Borrer, who discovered it on Brighthelmston beach in July 1807. We have in vain sought for a description in Roth, or any other competent writer, to which it could be referred.

The colour is a very pale dull rose-colour. The root fibrous. Fronds about 3 inches high, finer than the human hair, forming thick straight tufts like *C. stricta, Dillw. Conf. t.* 40, acutely forked at almost every joint. Joints very long; the smaller cylindrical; the larger ones swelling towards their upper end. Capsules obovate, containing a mass of dark-red seeds, and each standing on a short stalk, proceeding, mostly solitary, from some of the upper forks of the frond. Mr. Borrer is inclined to think the base of the capsule is, in a manner, articulated with its proper stalk. Sometimes these stalks have a lateral direction, as may be seen in our figure. This, like *C. multifida, t.* 1816, would come under Dr. Roth's *Ceramium*, a genus which perhaps may be established, when the subject has more generally been studied, and sufficient facts are collected for any theoretical botanist to decide upon it.





Nov. 1.1807. Publish'd by Jas. Sowerby London.

RIVULARIA vermiculata.

Worm-shaped Rivularia.

CRYPTOGAMIA Algæ.

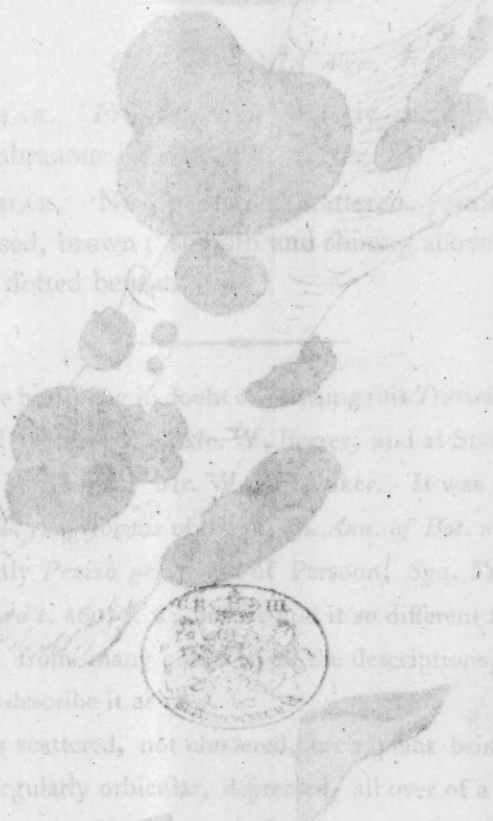
GEN. CHAR. *Frond* gelatinous, firm, destitute of an external cuticle. *Fructification* among jointed filaments, lodged in the substance of the frond.

SPEC. CHAR. Cylindrical, much branched, brown; branches scattered, subdivided, crooked. Internal filaments compound and divaricated; their ultimate branches clustered, beaded, thickened upwards. Fruit obovate, sessile at the base of the beaded branches.

SENT from the north-east coast of Ireland, near Larn, by Mr. Drummond, in August 1806. The specimen in our plate was found at Brighthelmston in July 1807, by Mr. W. Borrer. We cannot refer it to any plant described by British writers, who would all doubtless have reckoned it an *Ulva;* neither do we find any suitable description in Roth, to whose genus *Rivularia* it must surely be referred, unless the fruit, being separate from the filaments, should constitute a new genus, on the principle of that ingenious author's *Ceramium*. We had rather however wait till the fruit of all the original *Rivulariæ* are better ascertained.

The whole plant is 4 or 5 inches high, olive brown, very much and irregularly branched, cylindrical, solid, crooked, becoming flattish only when broken. Its whole substance is succulent and gelatinous, the external part presenting an assemblage of pellucid, slimy, jointed, branched filaments, more condensed and firmly compacted in the inner part. These filaments bear innumerable tufts or clusters of shorter ones, jointed quite in a different manner, being thickly beaded, or formed of globular articulations, which are moreover gradually larger towards the extremity. At the base of some of these beaded filaments stands an obovate pellucid capsule, containing apparently one dark-brown seed. These numerous capsules give the whole plant a dark hue.

Mr. Woodward's *Ulva decorticata, Tr. of Linn. Soc. v.* 3. 55, may possibly belong to this genus. See that excellent observer's remarks.



1819

Dec.1.1819 Published by Jas. Sowerby, London.

TREMELLA boletiformis.

Brown Rough-backed Tremella.

CRYPTOGAMIA Algæ.

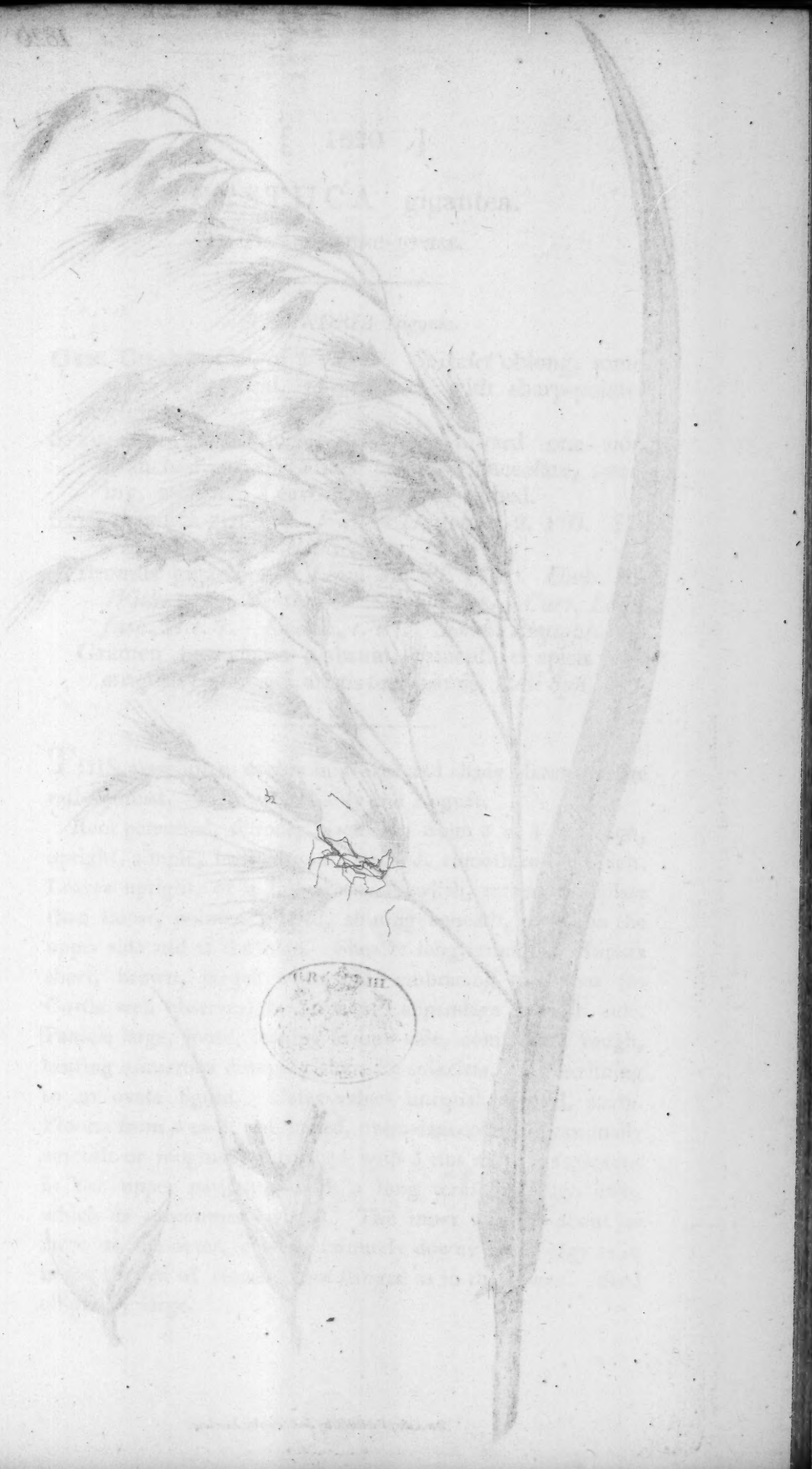
GEN. CHAR. *Fructification* scarcely perceptible in a membranous jelly-like substance.

SPEC. CHAR. Nearly sessile, scattered, roundish, depressed, brown; smooth and shining above; rough and dotted beneath.

WE have been long in doubt concerning this *Tremella*, which was found in Sussex by Mr. W. Borrer, and at Starston and Postwick Norfolk by Mr. W. J. Hooker. It was supposed to be the *T. fungiformis* of Roth, in *Ann. of Bot. v.* 1. 280; consequently *Peziza gelatinosa* of Persoon, *Syn. Fung.* 633, and *Bulliard t.* 460, *f.* 2; but we find it so different from that figure and from many points in all the descriptions, that we venture to describe it as new.

It grows scattered, not clustered, each plant being nearly sessile, irregularly orbicular, depressed, all over of a dull, not reddish, brown. The upper surface is unequal, but smooth and polished; the under rough, and as it were dotted, which roughness, extended to the edge, gives it a crenate aspect.

T. fungiformis is more stalked and reddish, concave at the top, and smooth on both sides.



Dec.1 1807. Publish'd by Ja.s Sowerby, London.

FESTUCA gigantea.

Tall Fescue-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Spikelet* oblong, somewhat cylindrical, two-ranked, with sharp-pointed glumes.

SPEC. CHAR. Panicle drooping toward one side, branched and spreading. Florets lanceolate, swelling, awned. Leaves lanceolate, ribbed.

SYN. Festuca gigantea. *Villars Dauph. v.* 2. 110. *Sm. Fl. Brit.* 120. *Relh.* 37.

Bromus giganteus. *Linn. Sp. Pl.* 114. *Huds.* 51. *With.* 162. *Sibth.* 48. *Abbot.* 24. *Curt. Lond. fasc.* 5. *t.* 7. *Knapp. t.* 87. *Ehrh. Phytoph.* 52.

Gramen avenaceum glabrum, paniculâ e spicis raris strigosis compositâ, aristis tenuissimis. *Raii Syn.* 415.

THIS grass often occurs in groves and shady places that are rather moist. It flowers in July and August.

Root perennial, fibrous, blackish. Stem 3 or 4 feet high, upright, simple, leafy, round, striated, smooth to the touch. Leaves upright, of a full green, broadish, rather lanceolate than linear, pointed, ribbed, shining beneath, rough on the upper side and at the edge. Sheaths long, smooth. Stipula short, brown, jagged when old, embracing the stem (as Curtis well observes) by an acute appendage at each side. Panicle large, loose, leaning to one side, compound, rough, bearing numerous drooping alternate spikelets, each inclining to an ovate figure. Calyx-valves unequal, ribbed, acute. Florets from 4 to 6, imbricated, ovato-lanceolate, occasionally smooth or roughish, furnished with 5 ribs most conspicuous in the upper part, and with a long terminal rough awn, which is sometimes twisted. The inner valve is about as large as the outer, cloven, minutely downy at the edge as in many species of *Festuca*, not fringed as in the *Bromi*. Seed elliptical, large.

Dec.1.1821. Published by Ja.s Sowerby London.

FESTUCA loliacea.

Spiked Fescue-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Spikelet* oblong, somewhat cylindrical, two-ranked, with sharp-pointed glumes.

SPEC. CHAR. Spike two-ranked, drooping. Spikelets nearly sessile, linear-oblong. Florets cylindrical, without awns or dorsal ribs.

SYN. Festuca loliacea. *Huds. ed.* 1. 38. *Sm. Fl. Brit.* 122. *With.* 157. *Hull.* 24. *Relh.* 38. *Sibth.* 45. *Curt. Lond. fasc.* 6. *t.* 9. *Knapp t.* 74.

F. fluitans β. *Huds.* 47.

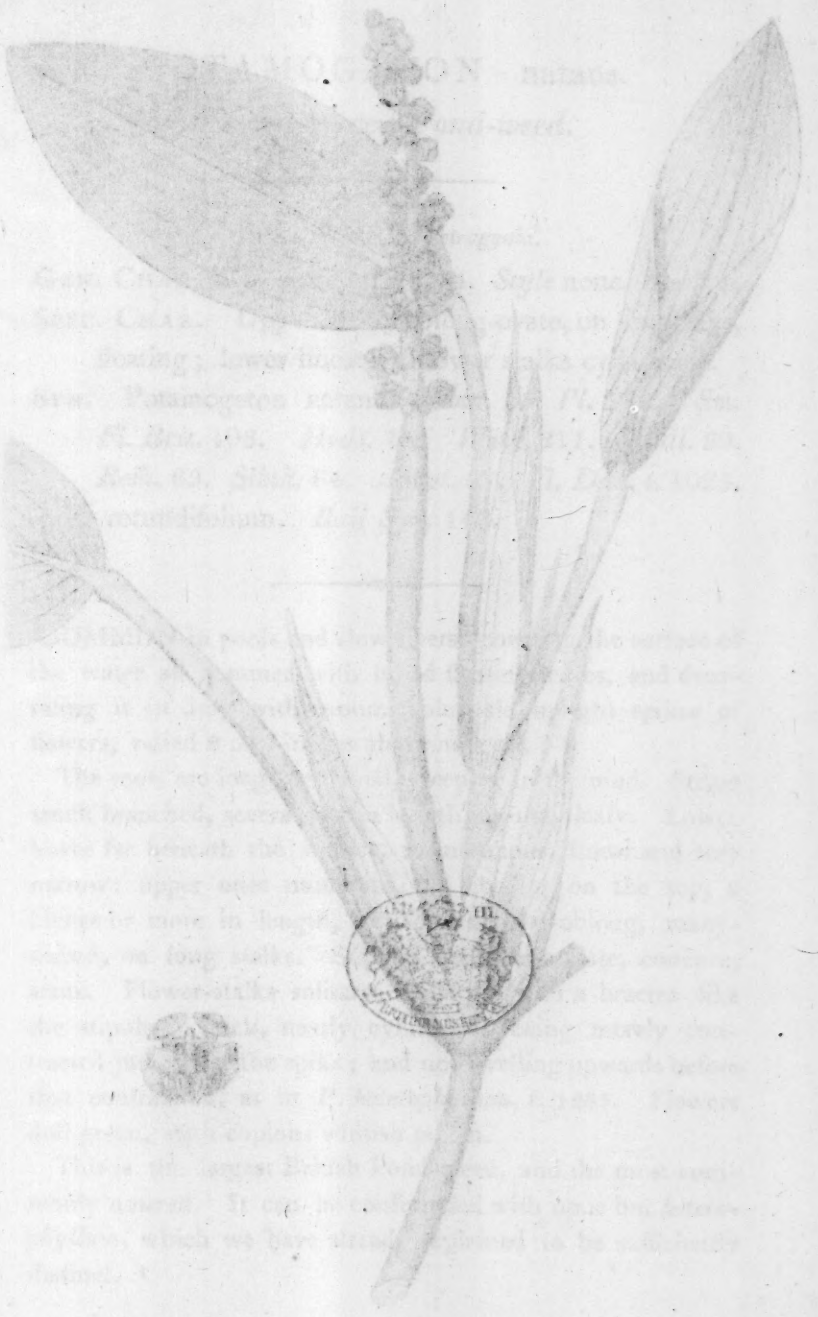
F. elongata. *Ehrh. Calam.* 93.

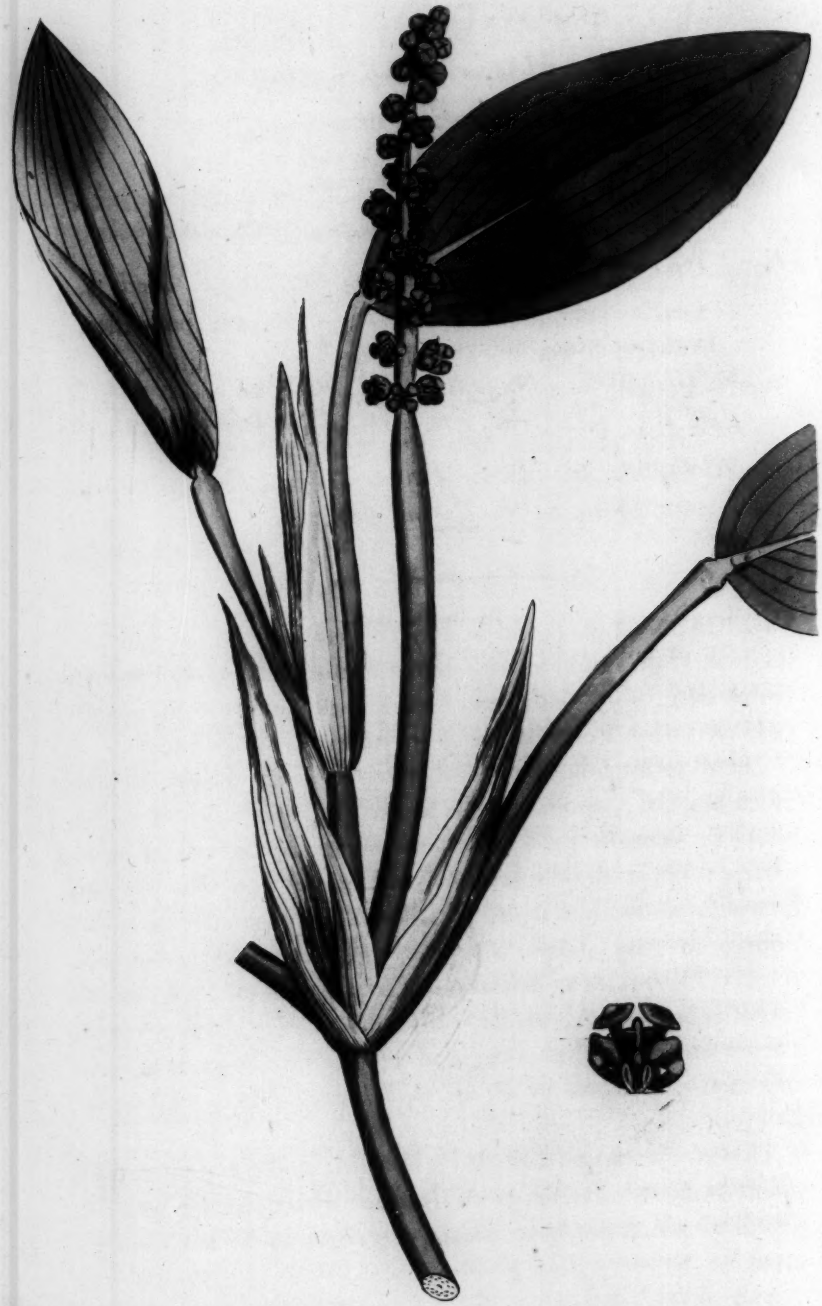
Graminis loliacei vulgaris varietas spicis rariùs dispositis. *Moris. sect.* 8. *t.* 2. *f.* 2.

NOT unfrequent in rich, rather moist, pastures and meadows, flowering in July, though its great resemblance to *Lolium perenne*, *t.* 315, occasions it to be generally overlooked.

Root perennial, fibrous. Stems erect, 2 feet high, simple, slender, leafy, round, smooth. Leaves linear, narrow, flat, ribbed, smooth, with long sheaths and very short stipulas. Spike long and lax, a little drooping, the spikelets upright, mostly sessile, in 2 ranks, alternate, linear-oblong, acute, many-flowered, awnless, smooth. Calyx of 2 very unequal, acute valves; the outermost strongly ribbed, not keeled. Florets somewhat loosely ranged, acute, cylindrical, smooth, without any keel or rib, except 2 small nerves near each margin: the inner valves about as large, flat, downy at the edge.

The 2-valved calyx and paler hue clearly distinguish it from *Lolium perenne*, as the acute florets, without any central ribs, do from all the varieties of *Poa fluitans*, *t.* 1520. Neither can we conceive this plant to be a hybrid production. Its seeds indeed are rarely ripened, because the roots increase very fast. It is esteemed a good pasture grass.





Dec. 1.1807. Published by Jas. Sowerby, London.

POTAMOGETON natans.

Broad-leaved Pond-weed.

TETRANDRIA Tetragynia.

GEN. CHAR. *Cal.* none. *Petals* 4. *Style* none. *Seeds* 4.

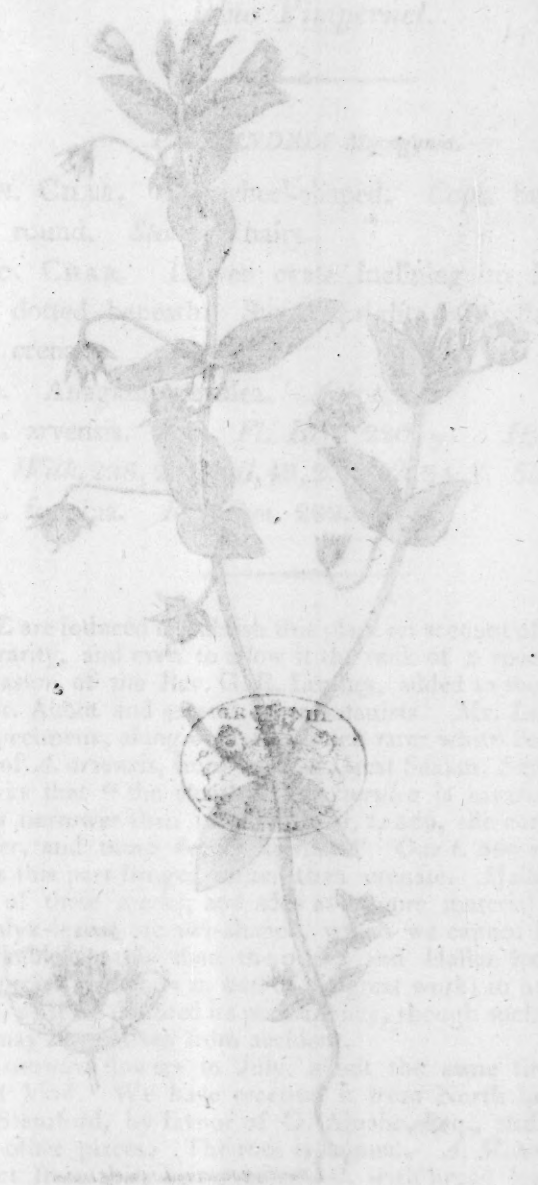
SPEC. CHAR. Upper leaves oblong-ovate, on footstalks, floating; lower linear. Flower stalks cylindrical.

SYN. Potamogeton natans. *Linn. Sp. Pl.* 182. *Sm. Fl. Brit.* 193. *Huds.* 74. *With.* 211. *Hull.* 39. *Relh.* 63. *Sibth.* 64. *Abbot.* 37. *Fl. Dan. t.* 1025.
P. rotundifolium. *Raii Syn.* 148.

COMMON in pools and slow rivers, covering the surface of the water all summer with broad floating leaves, and decorating it in July with innumerable pale upright spikes of flowers, raised 2 or 3 inches above its level.

The roots are long, perennial, creeping in the mud. Stems much branched, several feet in length, round, leafy. Lower leaves far beneath the surface, membranous, linear and very narrow: upper ones numerous, all floating on the top, 2 inches or more in length, coriaceous, oval-oblong, many-ribbed, on long stalks. Stipulas large, lanceolate, concave, acute. Flower-stalks solitary, axillary, (with a bractea like the stipulas,) thick, nearly cylindrical, being merely contracted just under the spike; and not swelling upwards before that contraction, as in *P. heterophyllum*, *t.* 1285. Flowers dull green, with copious whitish pollen.

This is the largest British Pond-weed, and the most commonly noticed. It can be confounded with none but *heterophyllum*, which we have already explained to be sufficiently distinct.



Del. Sulley. Published by Ja.s Sowerby, London.

ANAGALLIS cærulea.

Blue Pimpernel.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* wheel-shaped. *Caps.* bursting all round. *Stamina* hairy.

SPEC. CHAR. Leaves ovate inclining to lanceolate, dotted beneath. Stem upright. Corolla strongly crenate.

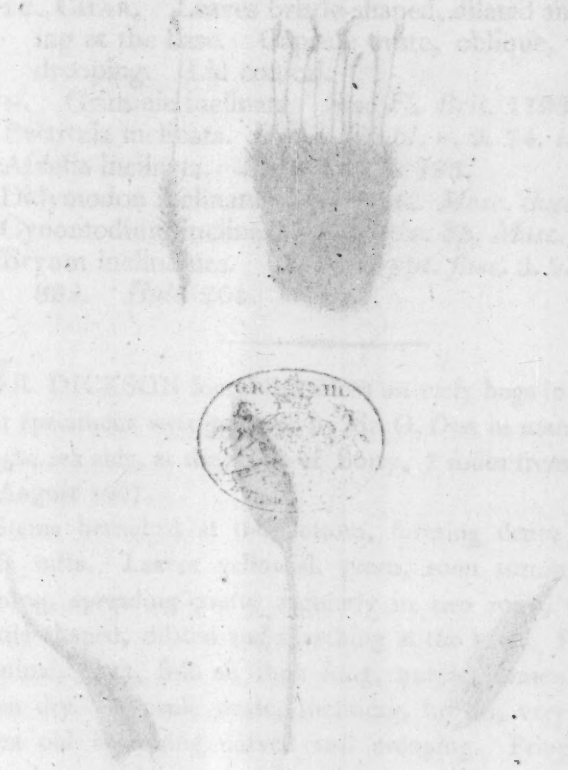
SYN. Anagallis cærulea. *Abbot.* 46.

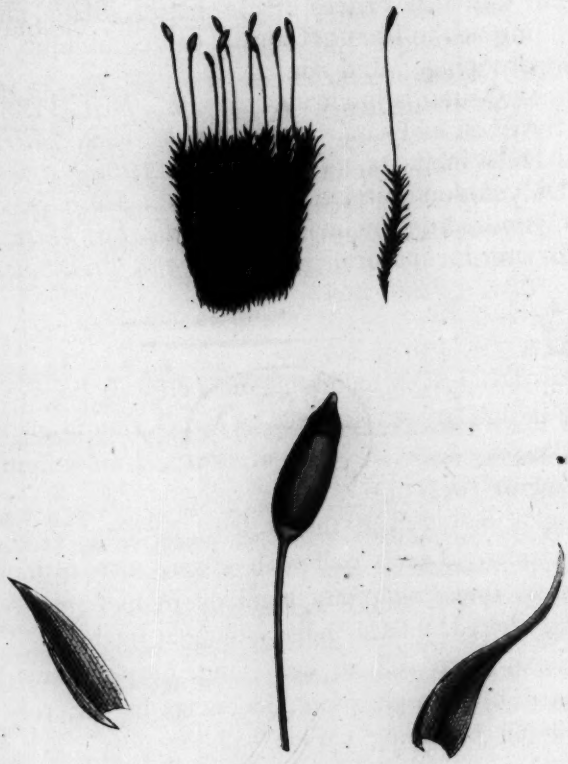
A. arvensis. *Sm. Fl. Brit.* 230, γ. *Huds.* 87, δ. *With.* 238, 2. *Hull.* 49, 2. *Relh.* 84, β. *Sibth.* 75, β.

A. fœmina. *Raii Syn.* 282.

WE are induced to publish this plant on account of its beauty and rarity, and even to allow it the rank of a species at the persuasion of the Rev. G. R. Leathes, added to the authority of Dr. Abbot and several other botanists. Mr. Leathes sent our specimens, along with the much rarer white-flowered variety of *A. arvensis*, from fields at Great Saxam, Suffolk. He remarks that "the stem of the *cærulea* is invariably erect, leaves narrower than in *A. arvensis*, *t.* 529, the corolla much smaller, and more deeply crenate." Our *t.* 529 incorrectly shows this part fringed rather than crenate. Haller notices some of these marks, and adds as a more material one that the calyx-leaves are awl-shaped, which we cannot find more remarkable in this than the other, and Haller has omitted this species (which is *n.* 626 of his great work) in his *Nomenclator*, as if he doubted its permanency, though such an omission may have arisen from accident.

A. cærulea flowers in July, about the same time as the scarlet kind. We have received it from North Luffenham, near Stamford, by favour of G. Ainslie, Esq., and from various other places. The root is annual. *A. Monelli* is very distinct from this, being perennial, with broad leaves, very long flower-stalks, large scarcely crenate flowers, and much more awl-shaped calyx-leaves. Perhaps Haller had examined this species in a garden, and confounded it with ours.





Decr.1824 Published by Jas. Sowerby London.

GRIMMIA inclinata.

Curve-fruited Grimmia.

CRYPTOGAMIA Musci.

GEN. CHAR. *Fringe* simple, of 16 teeth, broadest at their base. *Flowers* terminal. *Veil* cylindrical.

SPEC. CHAR. Leaves bristle-shaped, dilated and sheathing at the base. Capsule ovate, oblique, at length drooping. Lid conical.

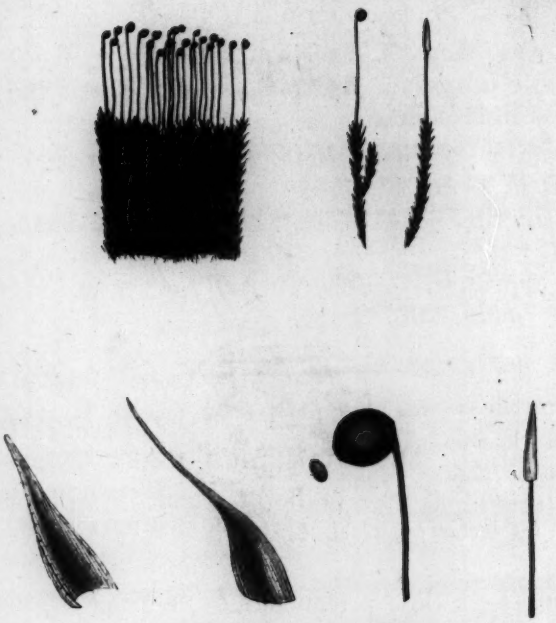
SYN. Grimmia inclinata. *Sm. Fl. Brit.* 1193.
Swartzia inclinata. *Hedw. Crypt. v.* 2. 74. *t.* 27.
Afzelia inclinata. *Ehrh. Crypt.* 193.
Didymodon inclinatum. *Swartz. Musc. Suec.* 28.
Cynontodium inclinatum. *Hedw. Sp. Musc.* 58.
Bryum inclinatum. *Dicks. Crypt. fasc.* 3. 9. *With.* 835. *Hull.* 264.

MR. DICKSON found this moss on turfy bogs in Scotland. Our specimens were gathered by Mr. G. Don in marshy places by the sea side, at the sands of Borry, 7 miles from Dundee, in August 1807.

Stems branched at the bottom, forming dense perennial leafy tufts. Leaves yellowish green, soon turning brown, shining, spreading pretty regularly in two rows, taper and bristle-shaped, dilated and sheathing at the base. Fruit-stalk terminal, erect, full an inch long, purple, somewhat wavy when dry. Capsule ovate, inclining, brown, very smooth, when old becoming curved and drooping. Fringe of 16, lanceolate, equidistant teeth, of a brownish purple, reticulated, and, according to Hedwig, perforated. Lid conical, short, obtuse, pale when young, but soon turning brown. Veil tipped with black, even in its youngest state.

The stamens and pistils being observed in the same flower, has caused this species and a few others to be separated by some botanists from *Grimmia* and *Trichostomum*, whence arose the above multiplicity of names; but experience shows such a generic character to be of no avail in mosses.

1825



Dec.1st 1827. Publish'd by Jas. Sowerby, London.

GRIMMIA nigrita.

Black-fruited Grimmia.

CRYPTOGAMIA Musci.

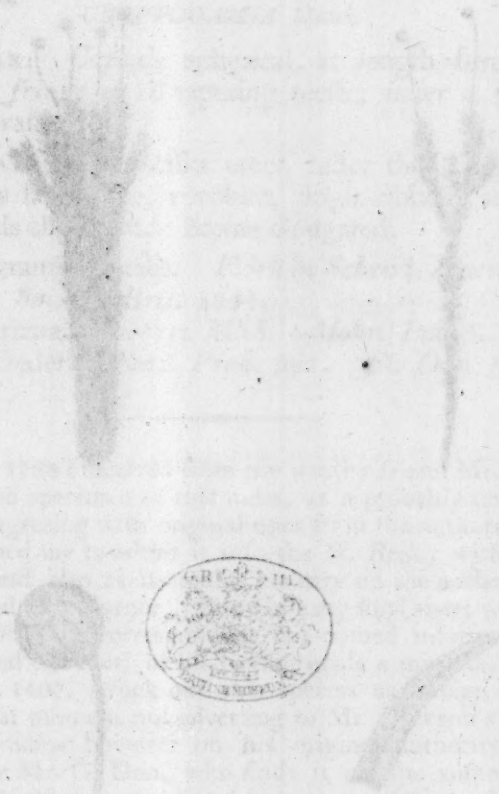
GEN. CHAR. *Fringe* simple, of 16 teeth, broadest at their base. *Flowers* terminal. *Veil* cylindrical.

SPEC. CHAR. Leaves lanceolate, dilated at the base. Capsule obovate, drooping. Lid hemisphærical with a little point.

SYN. Grimmia nigrita. *Roth. Germ. v.* 3. 146. *Sm. Fl. Brit.* 1195.
Weisia nigrita. *Hedw. Sp. Musc.* 72. *Crypt. v.* 3. 97. *t.* 39.
Bryum nigritum. *Dicks. Crypt. fasc.* 3. 9. *With.* 840. *Hull.* 266.

THIS rare moss was first noticed by Mr. Dickson on turfy ground in Scotland. Mr. G. Don gathered our specimens, in August 1807, on the sands of Borry, 7 miles from Dundee, along with *G. inclinata*, *t.* 1824. It is always found near the sea.

The stems form close perennial tufts, and are somewhat branched, closely covered with imbricated, lanceolate, pointed, entire, single-ribbed leaves, which are dilated at the base; incurved, and somewhat revolute, when dry: their colour is a pale yellowish green. Fruit-stalk terminal, crimson, not an inch high. Capsule small, obovate and singularly turgid, drooping, smooth, dark brown, by age sometimes almost black and obscurely furrowed. Lid convex, with a little short blunt point, like the *umbo* of a shield.——This moss and the foregoing, unnoticed by Linnæus, Dillenius, Ray, or any of their correspondents, were reserved for the minute and indefatigable observers of the present day, whose discoveries, even in this well-explored country, are continually enriching the science of natural history.



Dec.1.1826. Published by Jas. Sowerby London.

BARTRAMIA gracilis.

Tall Slender Bartramia.

CRYPTOGAMIA Musci.

GEN. CHAR. *Capsule* spherical, at length furrowed. *Outer fringe* of 16 tapering teeth; *inner* a plaited membrane.

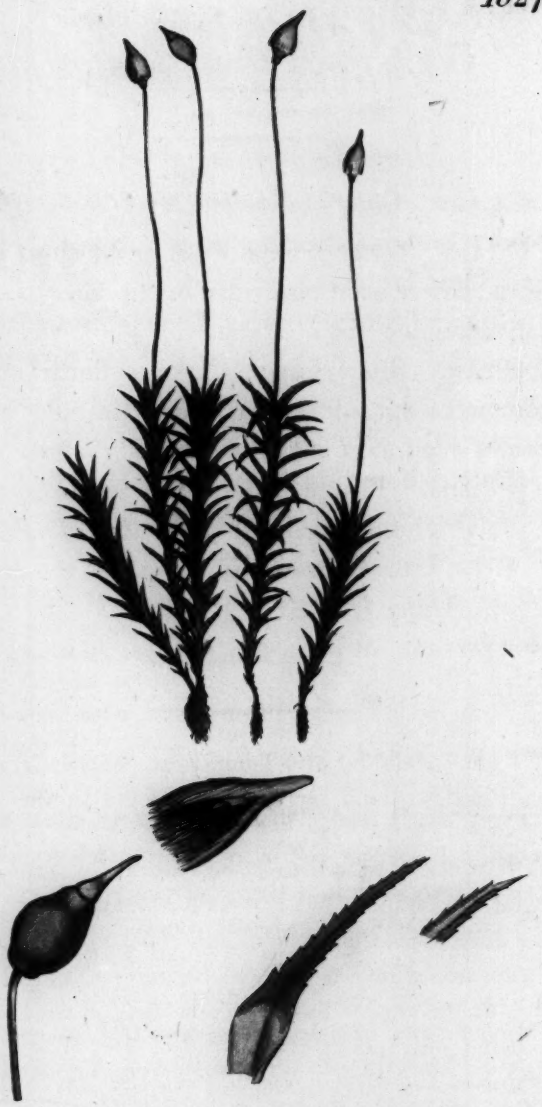
SPEC. CHAR. Fruit-stalks erect, taller than the stems. Leaves lanceolate, revolute, single-ribbed, serrated towards the point. Stems elongated.

SYN. Bartramia gracilis. *Flörk in Schrad. Journ. v.* 2. 171. *Sm. Fl. Brit.* 1341.
B. Oederiana. *Swartz MSS.—Mohr. Ind.* 5.
Bryum Oederi. *Retz. Prod.* 261. *Fl. Dan. t.* 478.

IN the year 1788 I received from my worthy friend Mr. Dickson a Scottish specimen of this moss, as a probably new species, which agreeing with original ones from the authors above quoted, caused me to admit it into the *Fl. Brit.*; with mention of Ireland also as its native country on the authority of Dr. Scott and Mr. Turner. But while my final sheet was under correction, my correspondent last-named informed me, with his usual candour, of his having made a mistake, and I therefore, *p.* 1407, struck out this species as foreign to our *Flora*, at that moment not adverting to Mr. Dickson's specimen. It remains however on his original authority, now confirmed by Mr. G. Don, who finds it on the summits of some of the highland mountains, bearing ripe fruit in August, and to whom we are obliged for this specimen.

The stems are much taller than those of *B. pomiformis*, *t.* 998, as well as more slender, compact, and usually less branched. The leaves are very different, being more broadly lanceolate, revolute; when dry recurved and twisted; serrated towards the point. Their colour is darker than in that plant. Fruit-stalks red. Capsules smaller, and more evidently curved towards one side when ripe.

Mr. Turner's Irish specimen, which led to the above error, is figured in his *Musc. Hib. t.* 10. *f.* 1, as a probable variety of *B. fontana*, with which it seems to us not well to accord, and we should rather assent to his suggestion of its being a new species.



Dec.1.1807. Publish'd. by Ja.s Sowerby London.

POLYTRICHUM gracile.

Long-stalked Hair-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Outer fringe* of 32 or 64 short incurved teeth: *inner* a flat undivided membrane. *Veil* generally double: the *outer* hairy.

SPEC. CHAR. Stem simple. Leaves linear-lanceolate, somewhat spreading, serrated. Capsule inclining, ovate, quadrangular, contracted at the base, without a pedestal. Fringe of thirty-two teeth.

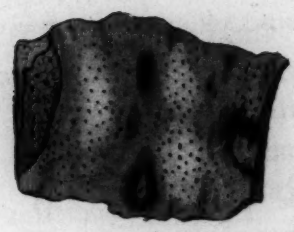
SYN. Polytrichum gracile. *Menz. Tr. of Linn. Soc. v.* 4. 73. *t.* 6. *f.* 3. *Sm. Fl. Brit.* 1374. *Hull.* 247. *Turn. Musc. Hib.* 85.

P. longisetum. *Swartz. Musc. Suec.* 76 *and* 103. *t.* 8. *f.* 16.

SENT from Ireland by Mr. Templeton, who finds it on both mountain and lowland bogs, bearing fruit in the middle of May.

It is very nearly related to *P. attenuatum, t.* 1198, at least in general appearance, but is usually somewhat smaller. Its essential differences from that species consist in the ovate form of the capsule, which as it ripens becomes so turgid as partly to obliterate the angles, but more especially in the teeth of the fringe being only about 32, instead of 64. The lid is also more conical, and less depressed, and the leaves more erect when dry. The fruit-stalk varies in length from 2 inches to 4, and in some of Dr. Swartz's specimens is very zigzag, which we have not seen in British or Irish ones.

It appears from the herbarium of Linnæus that this species is the No. 395 of his *Flora Laponica;* but doubtless he confounded it, like every body else till lately, with *P. commune.*



Dec 1.1827. Published by Ja.s Sowerby London.

OPEGRAPHA epipasta.

Dotted Opegrapha.

CRYPTOGAMIA Algæ.

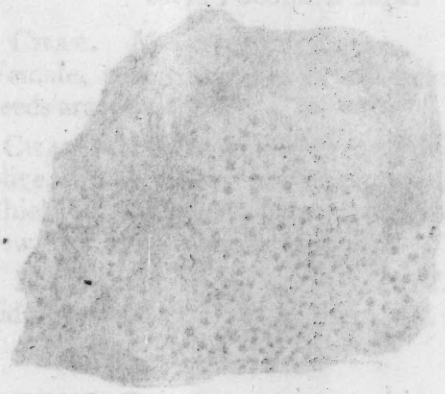
GEN. CHAR. *Seeds* in black, linear, sessile, simple or branched, bordered *clefts*, in an uninterrupted crust.

SPEC. CHAR. Crust irregularly circumscribed, very thin, smooth, glaucous-white. Clefts very minute, short, oblong or roundish, turgid, simple or somewhat aggregate.

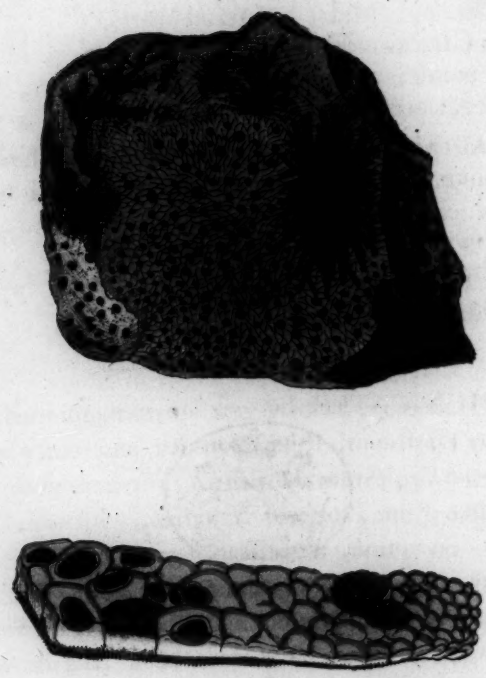
SYN. Opegrapha epipasta. *Ach. Meth.* 26.
Lichen epipastus. *Ach. Prod.* 23.

COMMON on the smooth barks of trees. We have it from Thorpe near Norwich, from Yarmouth, and from Sussex.

The crust forms roundish patches, well determined but not regularly circular, smooth, thin, of a greyish or glaucous white. By age it often grows more white and flaky. Fructification sprinkled over the crust like little black dots, rising up under its flakes, and so acquiring a sort of broken spurious border. Each dot, or cleft, is short, and, generally speaking, rather roundish than linear, tumid, rugged; very rarely aggregate so as to seem branched or compound. The habit of the crust, and of the fructification when microscopically examined, prove this to be a real *Opegrapha*, however dissimilar at first sight from other species, and confirm the genus as a natural one.



G. R. III.
BRITISH MUSEUM



December, Published by Jas Sowerby, London.

LICHEN athroocarpus.

Crowded Sunk-shielded Lichen.

CRYPTOGAMIA Algæ.

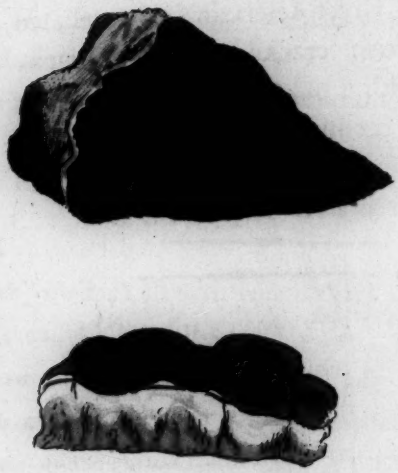
GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust determinate, tessellated, pale brownish olive, polished; its fragments tumid and angular. Shields sunk, black, flattish, crowded, with a narrow, whitish, spurious border.

SYN. Lichen athroocarpus. *Ach. Prod.* 77.
Lecidea athroocarpa. *Ach. Meth.* 41.

COMMUNICATED by our often-mentioned friend, the Rev. Mr. Harriman, from Cronkley and other mountainous places near Eggleston, Durham. We have compared it with a specimen from Professor Acharius, with which, as well as with his description, it precisely agrees.

It grows on granite or schistose rocks. The crust is well defined but not regularly circular; hard and uneven, not very thick; white within; its surface of a pale brownish olive, somewhat glossy, broken into innumerable angular fragments, not at all level or of equal height, the surface of each fragment being peculiarly tumid and angular. Shields small, angular, deeply sunk, one or more in each fragment or wart of the crust; their disk flat, or rather convex than concave, very black, with a roughish aspect; their border scarcely of their own substance, but of a spurious nature, proceeding merely from the elevation of the crust, a little pale as if rubbed, round each shield, very much like an *Urceolaria*, to which genus if the shields were concave Dr. Acharius says he would refer it. We presume to think it agrees better with that genus than with *Lecidea*, and perhaps shows them not to be naturally distinct. When old the shields become very convex, with some appearance of a proper border.



Dec.1.1807. Publish'd by Ja.ˢ Sowerby, London.

LICHEN cechumenus.

Confused Black and Olive Lichen.

CRYPTOGAMIA Algæ.

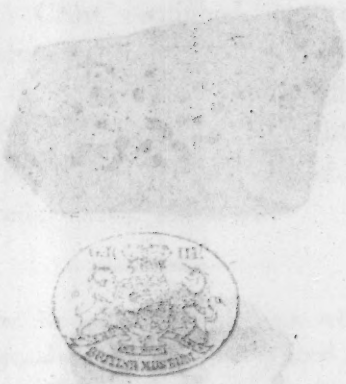
GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust determinate, tessellated, olive-grey with blackish cracks. Shields black, at length convex, with a black border of their own substance.

SYN. Lecidea cechumena. *Ach. Meth.* 48.
Lichen scytropus. *Ach. Prod.* 79?
Verrucaria fusco-atra. *Hoffm. Pl. Lich. v.* 3. 11. *t.* 54. *f.* 1.

THIS belongs to a very obscure tribe of Lichens, the synonyms of which are remarkably confused; but we shall endeavour to ascertain the species, step by step, as they fall in our way, by a comparison with authentic specimens, aided by the practical remarks of our correspondents. *Tab.* 1737, and *t.* 1829, are of this tribe.

The plant before us grows on granite or whin-stone rocks, and was sent by the Rev. Mr. Harriman from Durham. Its crust is uninterrupted, hard, uneven, of an olive or brownish grey, somewhat glossy, broken into innumerable small angular fragments, each of which is usually concave, and remarkable for being black-edged, especially in that pretty variety called by Acharius *diffracta*. The shields are numerous, a little prominent and convex, black, with a narrowish black border of their own colour and substance, but no spurious or accessory one from the crust.



1831

Jan.1 1808 Published by Jas Sowerby London.

LICHEN miscellus.

Rough Tartar-crusted Lichen.

CRYPTOGAMIA Algæ.

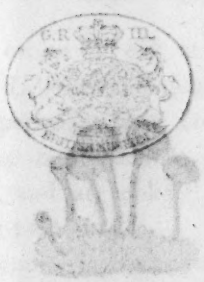
GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust continued, tartareous, cracked, tumid, uneven and granulated, pale brownish grey. Shields in the interstices, crowded, flattish, black; at length convex, with a very thin black border.

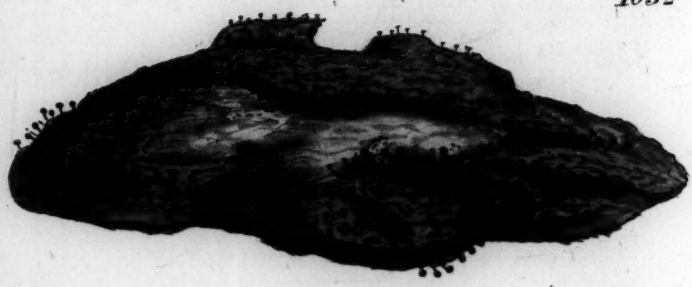
SYN. Lichen miscellus. *Ach. Prod.* 62.
Lecidea miscella. *Ach. Meth.* 39.

FOUND by the Rev. Mr. Harriman on whin-stone rocks near Winch bridge, also in the neighbourhood of Whey-syke, the milky rivulet, in Teesdale forest, Durham. His specimens have been sent to Dr. Acharius, and determined as above; therefore these synonyms must be removed from our *L. escharoides*, *t.* 1247, which is a very different plant, whatever the *escharoides* of Ehrhart may be. His original specimen is a poor one, but we hesitate to reduce it to the plant before us.

L. miscellus forms large, uninterrupted, but irregularly shaped, patches, of a thickish tartareous substance, their surface very irregularly swelled and cracked, of a pale brownish grey, scarcely glossy, but not powdery, each fragment very convex, and minutely granulated or wrinkled. Shields sunk between the fragments of the crust, often crowded or aggregate, deep black but somewhat polished, at first flat or hollowish, then irregularly convex, with a scarcely perceptible, and extremely narrow, black, wavy edge.



1832



Jan.1.1832. Published by Jas. Sowerby, London.

LICHEN hyperellus.

Convex Pin-headed Lichen.

CRYPTOGAMIA Algæ.

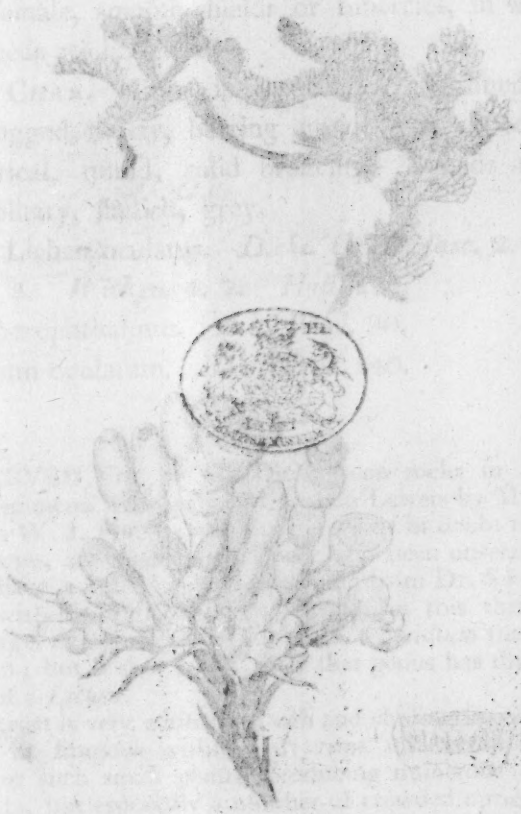
GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

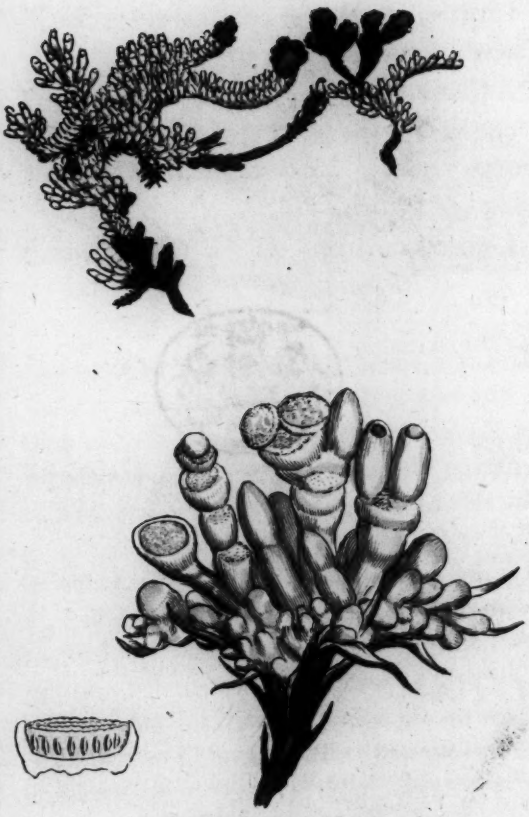
SPEC. CHAR. Crust rugged, granulated, tessellated, yellowish green. Tubercles on black stalks, black, with a very convex powdery disk.

SYN. Lichen hyperellus. *Ach. Prod.* 85.
Calicium hyperellum. *Ach. Meth.* 93.

THIS I first found on an old oak at Earsham, Norfolk, in 1783, but took it for *L. sphærocephalus*, *t.* 414. It however proves, by original specimens from Dr. Acharius, to be his *hyperellus*. We have received fine specimens found near Bury by Mr. Turner, and are obliged to him for calling our attention to the above name.

The crust is conspicuous for its bright yellowish green hue, and is very rugged, cracked and granulated, by no means leprous or mealy. Tubercles copious, black all over, on black stalks scarcely a line high, whose base is said by Acharius to be somewhat thickened in general; but this we scarcely perceive. The disk of each tubercle is very remarkably convex, or hemisphærical, rough or powdery in appearance, being besprinkled with innumerable seeds, found by Mr. J. D. Sowerby to be combined in pairs, and each about the 8000th part of an inch in diameter. The border of the whole tubercle is smooth, and in due time reflexed.





Jan.1.1808. Published by Jas. Sowerby, London.

LICHEN oculatus.

Eye-like Coralline Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.

Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust indeterminate, continued, white, rugged, warty, bearing upright, clustered, cylindrical, tumid, solid branches. Shields terminal, solitary, flattish, grey.

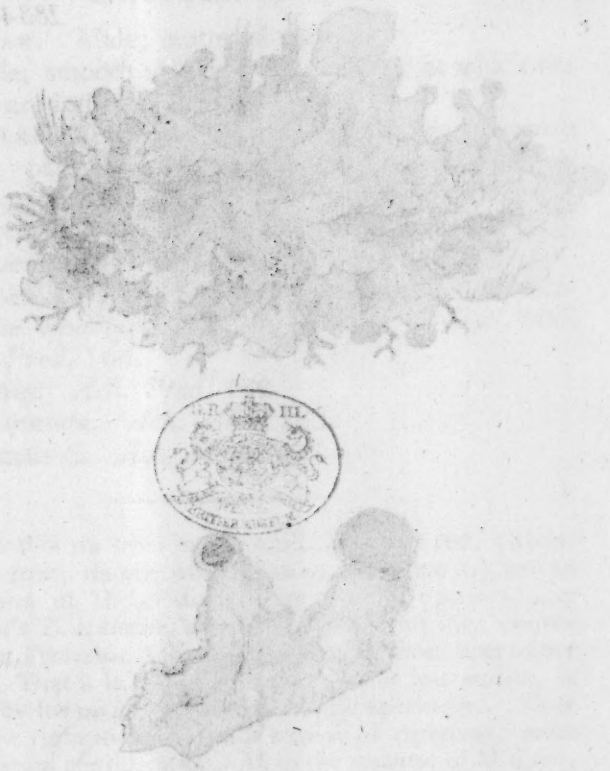
SYN. Lichen oculatus. *Dicks. Crypt. fasc.* 2. 17. *t.* 6. *f.* 3. *With. v.* 4. 7. *Hull.* 285.

L. horophthalmus. *Ach. Prod.* 90.

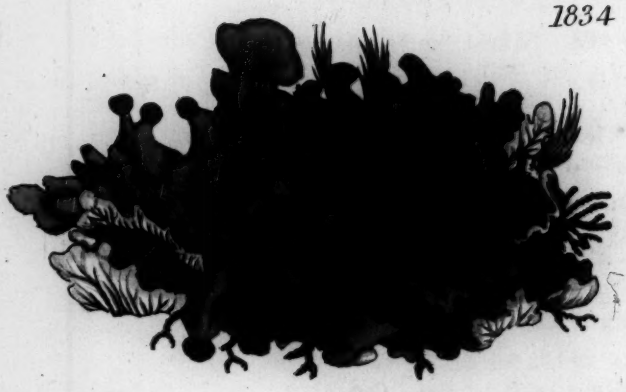
Isidium oculatum. *Ach. Meth.* 140.

OBSERVED first by Mr. Dickson on rocks in Scotland. Our specimens were gathered on Ben Lawers by Mr. Turner and Mr. W. J. Hooker. Acharius seems in doubt respecting this species, and yet it can scarcely have been unseen by him, as we have a fine Lapland specimen from Dr. Swartz connected with his original *L. frigidus*. Can this therefore be the *Isidium dactylinum?* That it is an *Isidium* there can be no doubt; but it shows how truly that genus has the fructification of a *Lichen*.

The crust is very white; smooth and shining in its surface; spongy or fungous within. It runs uninterruptedly over mosses or such small plants, producing numerous swellings and warts, but especially a number of crowded upright cylindrical uneven branches, mostly, but not invariably, simple, fungous within, brittle like a coralline when dry. At the end of each perfect branch is one small solitary horizontal shield, of a much less diameter than the branch, and as it were immersed in its summit, so as to have a border from the branch itself. The disk when young is grey, but at length it seems to become white and rugged, perhaps in consequence of the discharge of the seeds, which are plainly lodged in cells within it when full grown.



1834



Jan.1808. Published by Ja.s Sowerby London.

LICHEN scutatus.

Target-fruited Leathery Lichen.

CRYPTOGAMIA Algæ.

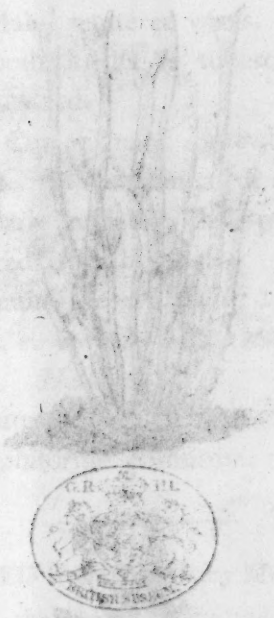
GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Frond coriaceous, spreading, brownish grey; pale, reddish, and veiny beneath; lobes oblong, their margin crisped and powdery. Shields in front, somewhat stalked, round, dark brown, with an inflexed, pale, crenate border.

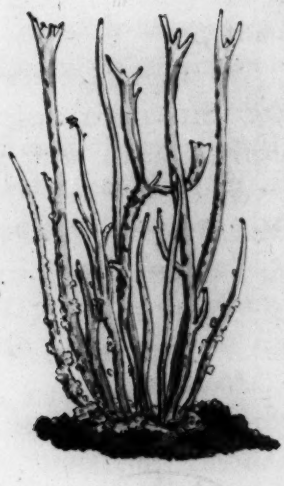
SYN. Lichen scutatus. *Dicks. Crypt. fasc.* 3. 18, *without the synonym.* *With. v.* 4. 71. *Hull.* 300. *Ach. Prod.* 166.
L. collinus. *Ach. Prod.* 162.
Peltidea scutata. *Ach. Meth.* 285.
P. rufescens β. *Ach. Meth.* 285.

I FOUND this on trees in Westmoreland in 1782, (when, for want of fruit, no one would dare to determine it,) and in fine perfection at Hafod many years after. It proves to be Mr. Dickson's *L. scutatus*, as he himself informs me; consequently what Professor Acharius has adopted from him under that name. That it is the *collinus* also of the last author, is determined by his own examination of my specimens. How far he is now right in making it a variety of *rufescens*, must be left for future consideration. As to the *scutatus* of Wulfen, it is most evidently the *sepincola*, and surely not even a variety.

Our present specimen was gathered on trees at Inverary by Mr. Turner and Mr. W. J. Hooker. The fronds spread in broad loose patches, like the imbricated Lichens, over the trunks of old trees, among *L. pulmonarius*, &c. They are leathery, smooth and of a brownish or greenish grey above; pale with reddish as well as black veins beneath, though naked of fibres except the actual roots. The lobes are singularly elongated, and as remarkably crisped and powdery at their edges. Their extremities form a kind of stalk to the flat, round, dark-brown shields, each of which has a narrow, inflexed, crenate, pale border.——Our English translators make Mr. Dickson describe this as "veinless" beneath, though he only says *nudus*.



1835



Jan.1.1808. Published by Jas. Sowerby, London.

LICHEN radiatus.

Radiated Cup Lichen.

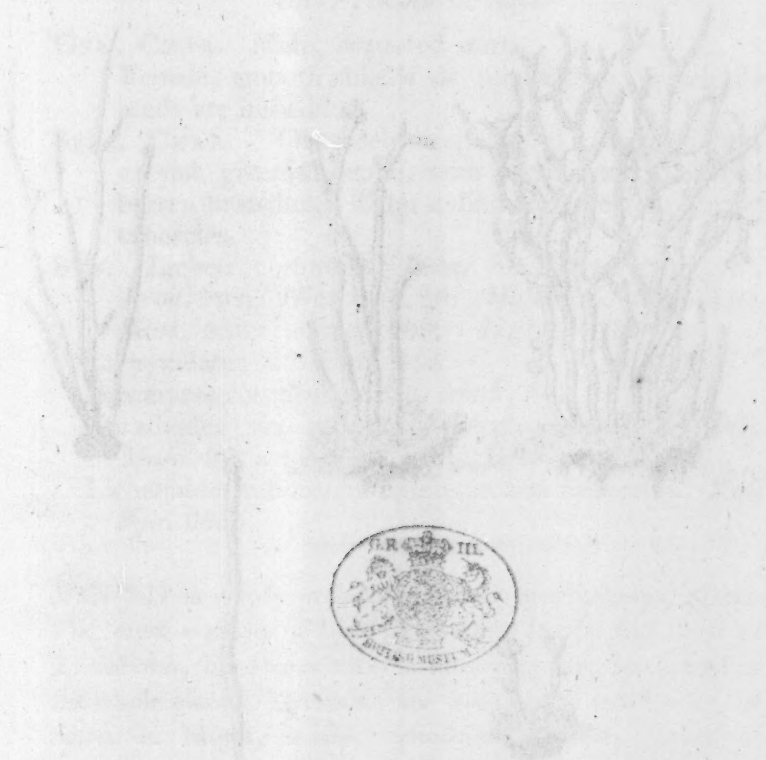
CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

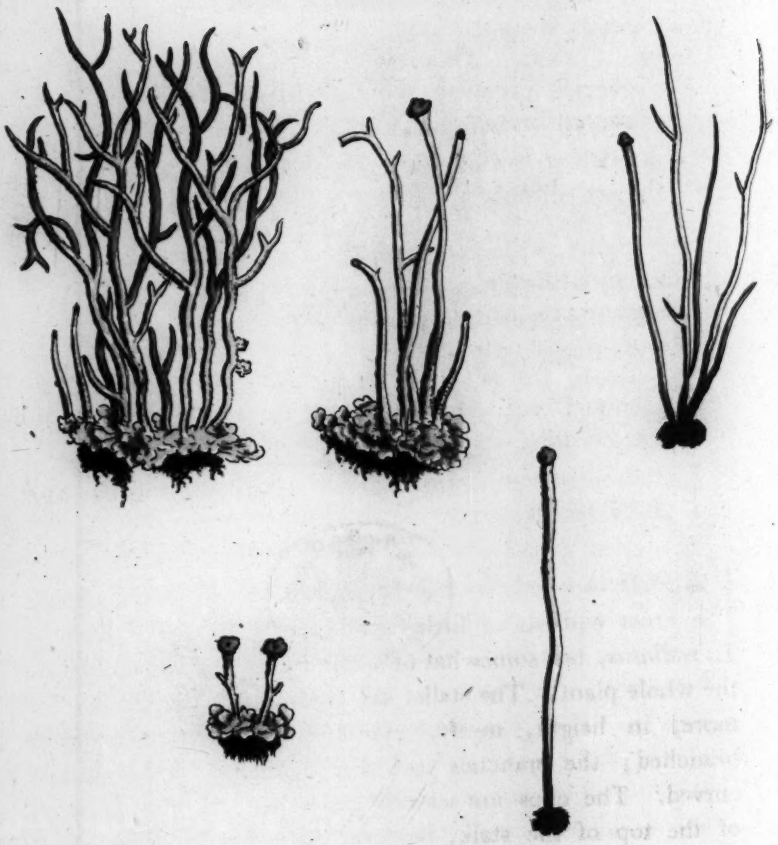
SPEC. CHAR. Cup-shaped, somewhat cartilaginous, greenish white. Stalks elongated, slender, powdery. Cups irregularly radiated, their points tipped with small acute reddish tubercles.

SYN. Lichen radiatus. *Schreb. Lips.* 122. *Ach. Prod.* 190. *With. v.* 4. 38. *Hull.* 303. *Sibth.* 333.
L. pyxidatus ϱ. *Huds.* 555.
Bæomyces radiatus. *Ach. Meth.* 342.
Coralloides scyphiforme cornutum. *Dill. Musc.* 92. *t.* 15. *f.* 16.

COMMUNICATED from Norfolk by Mr. Turner. It grows in shady woods, on the ground. The crust consists of little greenish leaves, which are sometimes scattered about the lower part of the stalks, like small scales. Stalks about two inches high, slender, cylindrical, hollow, simple or slightly branched, of a substance rather cartilaginous than leathery, most brittle when wet, of a greenish, rather than greyish, white; their surface always powdery. Cups tapering, rude and irregular, composed of nearly upright radiating sharp points, each of which is tipped with a minute reddish acute tubercle, approaching in our specimens to scarlet, but turning to a red brown by age. Some branches of the plant are simple, bearing only one tubercle.



G.R. III.
BRITISH MUSEUM



Jan.1.1808. Publish'd by Jas. Sowerby London.

LICHEN cornutus.

Horned Cup Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Obscurely cup shaped, cartilaginous, greyish greenish white, with numerous awl-shaped barren branches. Cups cylindrical, bearing scarlet tubercles.

SYN. Lichen cornutus. *Linn. Sp. Pl.* 1620. *Ach. Prod.* 192. *With. v.* 4. 39. *Hull.* 304. *Relh.* 470. *Sibth.* 333. *Abbot.* 269. *Lightf.* 875.
L. pyxidatus λ. *Huds.* 553.
Bæomyces cornutus. *Ach. Meth.* 343.
Coralloides vix ramosum, scyphis obscuris. *Dill. Musc.* 90. *t.* 15. *f.* 14, A, C, F.
Lichenoides tubulosum cinereum non ramosum. *Raii Syn.* 68.

FOUND in woody or heathy, rather mountainous, places. The crust consists of little round lobed leaves, like those of *L. radiatus*, but somewhat of a more grey hue, as indeed is the whole plant. The stalks are from one to two inches, or more, in height, mealy, cylindrical, slender, simple or branched; the branches awl-shaped, acute, more or less curved. The cups are scarcely more than a slight dilatation of the top of the stalk, bordered with a series of small tubercles, which are sometimes stalked, but more frequently sessile and confluent, or even forming one continued tubercle, rendered annular by a small central perforation. We find the tubercles always scarlet, though inclined to turn brown with age. The varieties C and F of Dillenius are very scaly. These are of extremely unfrequent occurrence. B, D and F of Dillenius, are different species from this; the latter possibly *L. vermicularis*, but if so the leaves are misapplied.

G.R. III.

Jan. 1.1838. Published by Jas. Sowerby London.

FUCUS alatus.

Winged Crimson Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

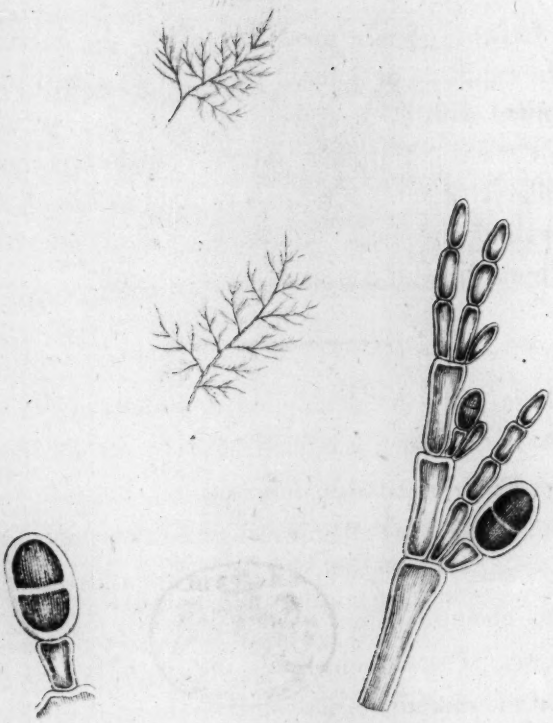
SPEC. CHAR. Frond membranous, thin, repeatedly and alternately branched, crimson; its segments alternately decurrent down the midrib. Fruit in lanceolate leaflets.

SYN. Fucus alatus. *Linn. Mant.* 135. *Turn. Syn.* 144. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 142. *Huds.* 578. *With. v.* 4. 95. *Hull.* 319. *Lightf.* 951. *Stackh. t.* 13. *Gmel. Fuci, t.* 25.
F. dichotomus parvus, costatus et membranaceus. *Dill. in Raii Syn.* 44.

A MOST beautiful species, common on our coasts, and generally admired by all who have eyes for the works of nature. Mr. Turner presumes it to be perennial.

The fronds are 3 or 4 inches high, growing many together from a small flat disk, repeatedly branched in an alternate or forked manner, consisting of a dark midrib, bordered with a fine delicate membrane, running down it on each side in alternate, interrupted, but otherwise entire, portions; the summits are notched, the rib gradually vanishing there. Several little, axillary, stalked, lanceolate leaflets are found occasionally, especially on old shabby specimens, each containing in its centre, (the rib being wanting,) a round cluster of seeds. These we have received from Mr. Brodie and Mr. Drummond. Mr. Turner has favoured us with a specimen in which the seeds are disposed in a line on each side of the midrib of the uppermost young branches. The colour of the whole is a beautiful crimson, more or less deep, sometimes greenish in decay.

G R
III



Jan.1 1808. Published by Jas. Sowerby, London.

CONFERVA interrupta.

Interrupted Purplish Conferva.

CRYPTOGAMIA Algæ.

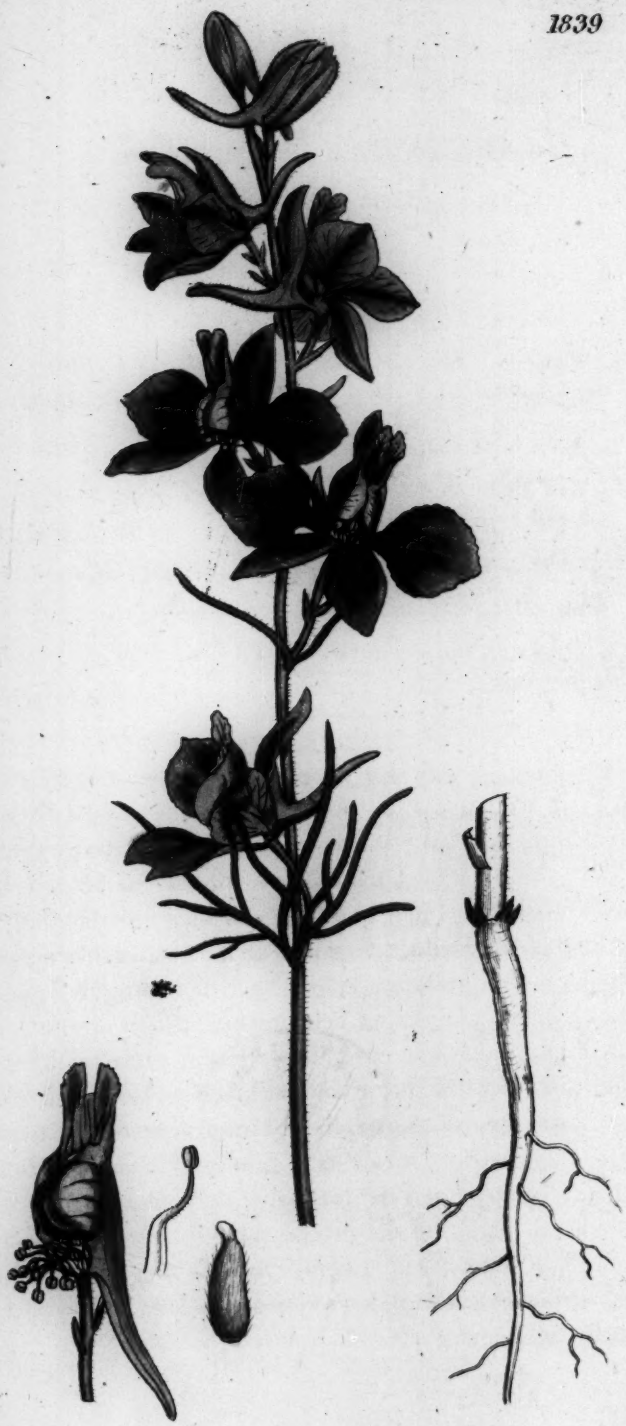
GEN. CHAR. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

SPEC. CHAR. Purplish, much branched, forked, capillary. Joints four times as long as broad, slightly swelling upwards. Capsules on short lateral stalks, elliptical, with a transverse separation.

WE have found no description in authors of this curious little *Conferva*, which was discovered by Mr. W. Borrer on the Brighthelmston coast in July last.

The fronds are of a dull brownish rose-colour, about an inch high, very much branched in a clustered or proliferous manner; the joints about four times as long as broad, dilated upwards and obtuse. The capsules grow on short, lateral, solitary stalks, at the summits of the joints on the outer side, and are elliptical, very peculiar for being, when ripe, distinctly divided by a transverse partition into two cells or masses of dark-red seeds.

In many points this plant resembles *C. pedicellata, t.* 1817, but is scarcely one third so large, nor are its joints so long, nor the summits of the branches so taper, not to mention its divided fruit.



Jan.1.1808. Publish'd by Jas. Sowerby London.

DELPHINIUM Consolida.

Field Larkspur.

POLYANDRIA Trigynia.

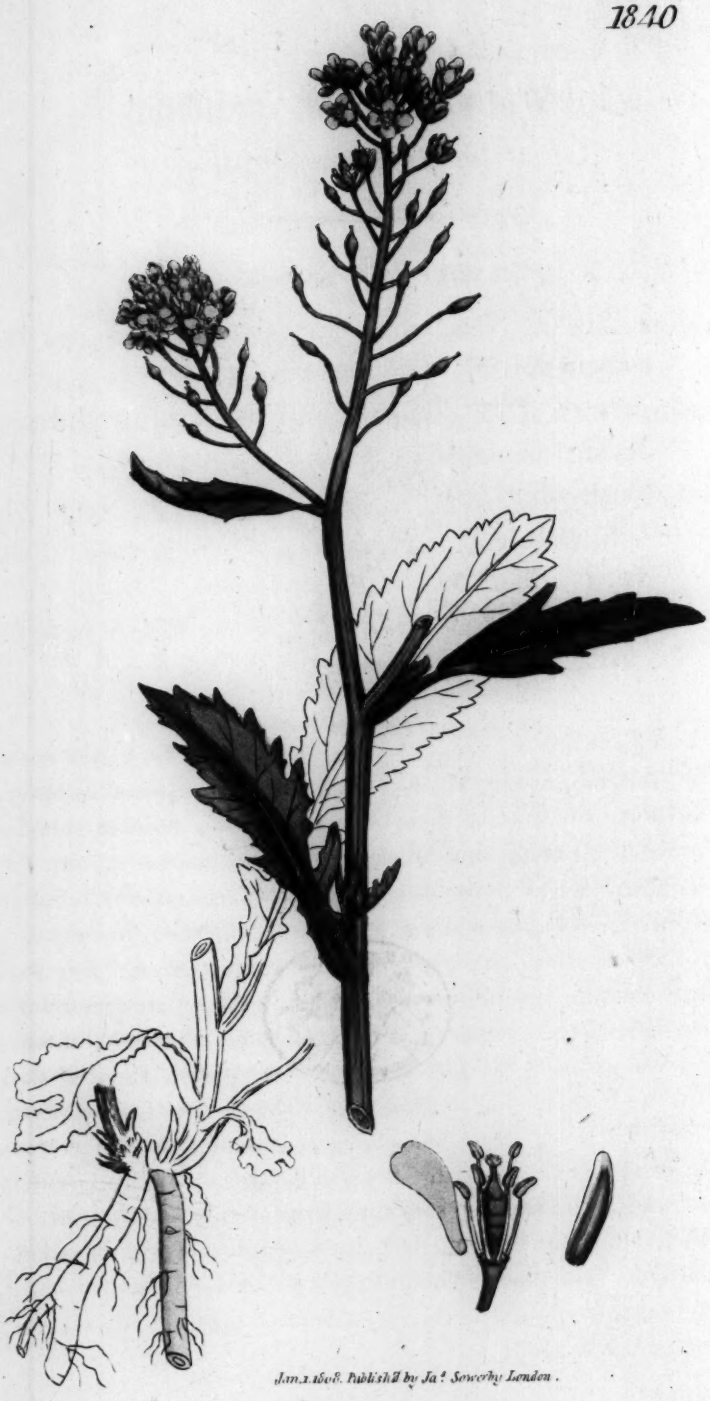
GEN. CHAR. *Cal.* none. *Petals 5*; the upper one spurred. *Nectary* cloven, with a posterior spur.

SPEC. CHAR. Capsule solitary. Nectary of one leaf. Stem subdivided.

SYN. Delphinium Consolida. *Linn. Sp. Pl.* 748. *Sm. Fl. Brit.* 577. *Huds.* 235. *With.* 494. *Hull.* 118. *Relh.* 209. *Abbot.* 118.
D. segetum, flore cæruleo. *Dill. in Raii Syn.* 273.

RAY, it seems, did not consider this plant, which is the "Branching Larkspur" of the gardens, as a native of Britain; but since the time of Dillenius it has been, without scruple, received as such. Indeed nothing can be more common, nor more undoubtedly wild, than it is in all the open chalky or sandy fields of Cambridgeshire, Suffolk, &c., flowering in July.

Root annual. Herbage finely downy. Stem upright, 2 or 3 feet high, much branched and spreading; the branches alternate, slender, straight, round and leafy. Leaves alternate, sessile, pale greyish green, divided into numerous, alternate, linear, very narrow segments. Flowers in long terminal clusters. Nectary of one leaf, slightly cloven, pale purple, as are also the backs of the petals, though their upper side is of a brilliant blue, varying occasionally to pale blue, pink, or white. Spur ascending, downy, about as long as the petals. Germen, and consequently the capsule, solitary.



Jan.1.1840. Published by Ja.s Sowerby London.

SISYMBRIUM amphibium.

Great Water Rocket or Radish.

TETRADYNAMIA Siliquosa.

GEN. CHAR. *Pod* cylindrical, bursting with nearly straight valves. *Cal.* and *Cor.* spreading.

SPEC. CHAR. Pods declining, on longish stalks. Leaves oblong, pinnatifid or serrated. Petals longer than the calyx.

SYN. Sisymbrium amphibium. *Linn. Sp. Pl.* 917. *Sm. Fl. Brit.* 702. *Huds.* 296 β and γ. *With.* 581. *Hull.* 150. *Relh.* 257. *Sibth.* 207. *Abbot.* 143.
Radicula sylvestris, seu palustris. *Raii Syn.* 301.

NOT rare in watery places, especially in rivers and ditches, where it grows to a great size, with long floating stems, throwing out abundance of fibrous roots, and bearing deeply pectinated leaves under water. Sometimes it grows on the neighbouring banks and dry ground, in a smaller form, with broader leaves, which are only serrated, not pinnatifid. The roots themselves are not of the creeping kind. They are perennial, long and perpendicular. The leaves are, as above hinted, very various in form, but more or less oblong, clasping the stem with their dilated base; the radical ones on footstalks. Flowers yellow, their petals always longer than the calyx. Germen globular, stalked. Style elongated. The fruit-stalks are longish and slender, spreading horizontally, and the pods, which are short and small, point upwards. They are often abortive. The flowers abound throughout July and August.

Hudson confounded this very distinct species with *S. terrestre*; see *t.* 1747.

Jan.1.1808. Published by Jas Sowerby London.

LAVATERA arborea.

Sea Tree-Mallow.

MONADELPHIA Polyandria.

GEN. CHAR. *Cal.* double; the outermost 3-cleft. *Capsules* numerous, circularly arranged. *Seeds* solitary.

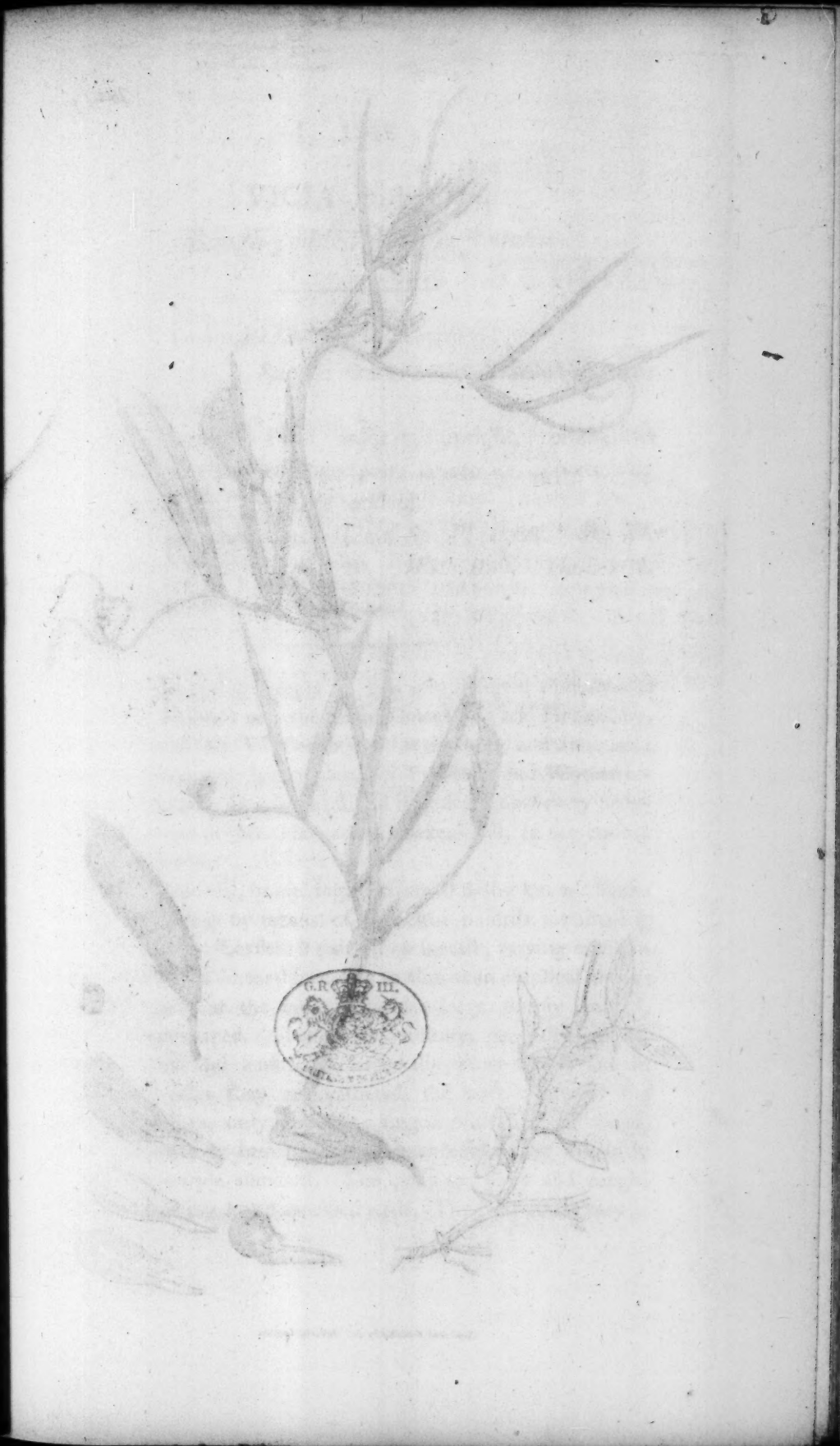
SPEC. CHAR. Stem arborescent. Leaves downy, plaited, with seven angles. Flower-stalks axillary, clustered, single-flowered.

SYN. Lavatera arborea. *Linn. Sp. Pl.* 972. *Sm. Fl. Brit.* 742. *Huds.* 306. *With.* 614. *Hull.* 154. *Lightf.* 374.

Malva arborea marina nostras. *Raii Syn.* 252.

THE Tree Mallow grows wild on several parts of the south-west coast of Britain, as well as on the east coast of Scotland, on rocky cliffs, flowering in July, and often producing a long succession of bloom. In a garden, whence our specimen was taken, the plant often remains some years without blossoming, but dies in the winter after it has flowered, being naturally biennial. Seeds scattered in the ground will some of them keep springing up every season, for an indeterminate number of years; but the young plants are impatient of cold, except in maritime situations, and few of them survive even a single winter.

The root is deep and much branched. Stem 6 to 10 feet high, upright, straight, round, thick, simple, except in the upper part, where it forms a branching leafy head. It is clothed with clusters of small deflexed bristles. Leaves alternate, on long stalks, pliable and downy, of seven shallow crenate lobes. Flowers on simple axillary clustered stalks, very much like those of *Malva sylvestris, t.* 671. Outer calyx deeply divided into 3 large lobes, but not, as in *Malua*, formed of 3 separate leaves, a slight and rather artificial distinction.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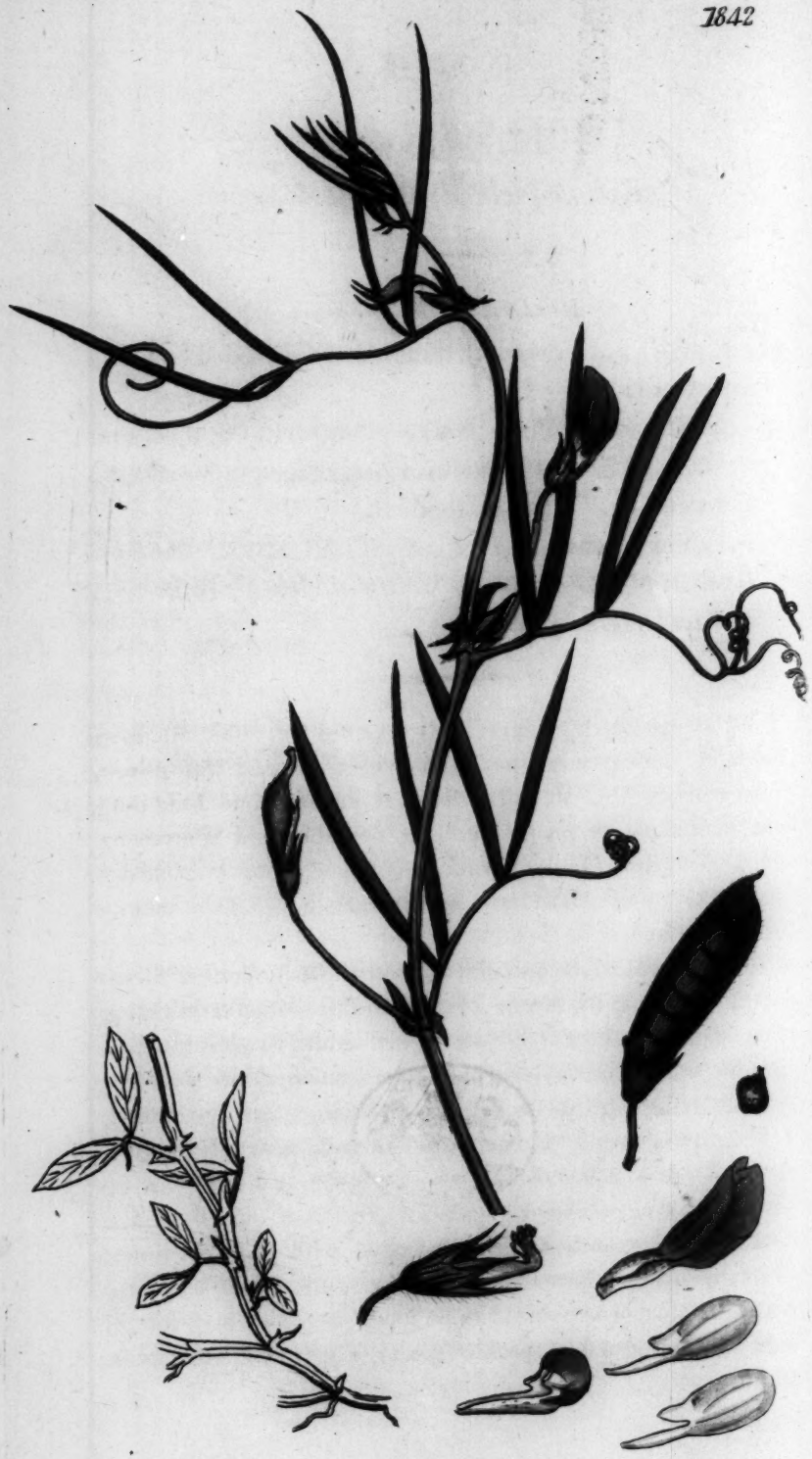


Jan.1.1808. Published by Ja.s Sowerby London.

VICIA bithynica.

Rough-podded Purple Vetch.

DIADELPHIA Decandria.

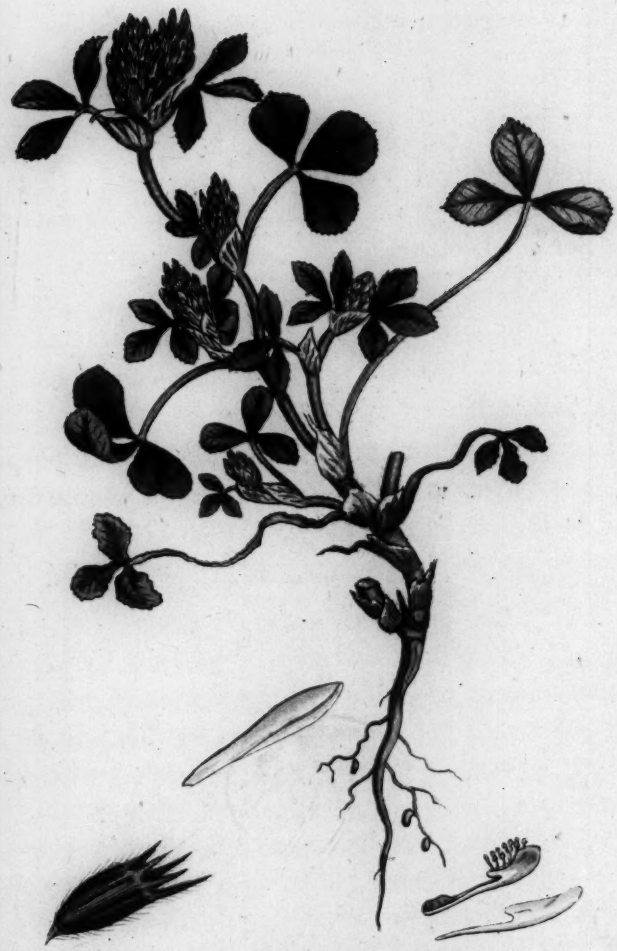
GEN. CHAR. *Stigma* transversely bearded on the lower side.

SPEC. CHAR. Pods solitary, upright, rough, on stalks. Leaflets two pair, lanceolate approaching to elliptic. Stipulas toothed.

SYN. Vicia bithynica. *Linn. Sp. Pl.* 1038. *Sm. Fl. Brit.* 774. *Huds.* 320. *With.* 639. *Hull.* 162. *Jacq. Hort. Vind. t.* 147.

THIS rare Vetch occurs in two very different situations in England, in fields near the sea in Dorsetshire and Hampshire, from whence Mr. W. Borrer sent it in May and June last; and in hedges or bushy places in Yorkshire and Worcestershire. The Rev. Dr. Abbot found it under almost every hedge on the estate of Mr. Harris at Chocken-hall, in the county last mentioned.

Roots perennial, branching, with small fleshy knobs. Stems weak, climbing by means of branched tendrils terminating the leaf-stalks. Leaflets 2 pair on each stalk, varying much in breadth from a linear-lanceolate to almost an elliptical shape; slightly hairy at the back. Stipulas large, deeply toothed, half arrow-shaped. Flowers on solitary, generally simple, stalks, large and handsome, especially when fresh; but in 12 hours after they are gathered, the pure white of the keel and wings, only tipped or tinged with blue or violet, turns greenish or brownish, no longer contrasting elegantly with the purple standard. The pods are hairy and rough, each containing 5 or 6 speckled seeds. The fruit-stalks vary in length.



Feb. 1808. Published by Jas Sowerby London.

TRIFOLIUM striatum.

Soft Knotted Trefoil.

DIADELPHIA Decandria.

GEN. CHAR. *Flowers* more or less capitate. *Pod* scarcely longer than the calyx, never bursting, but falling off entire.

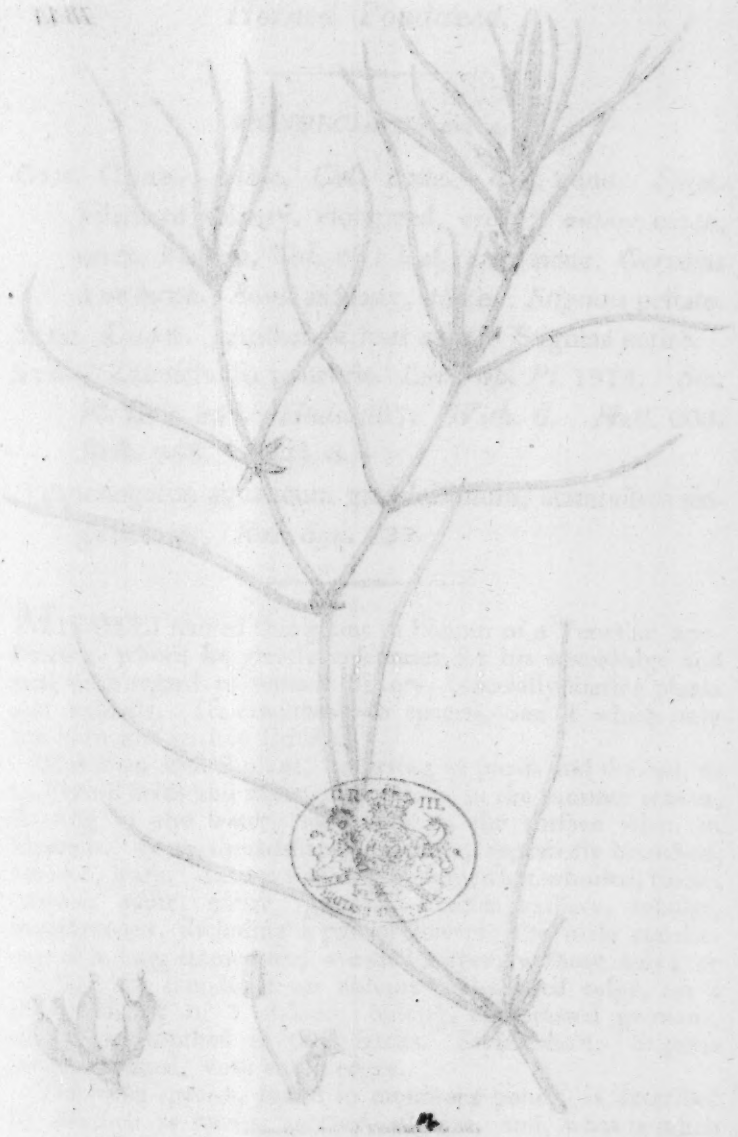
SPEC. CHAR. Heads of flowers sessile, both lateral and terminal, ovate. Calyx elliptical, hairy, furrowed; with bristle-shaped teeth.

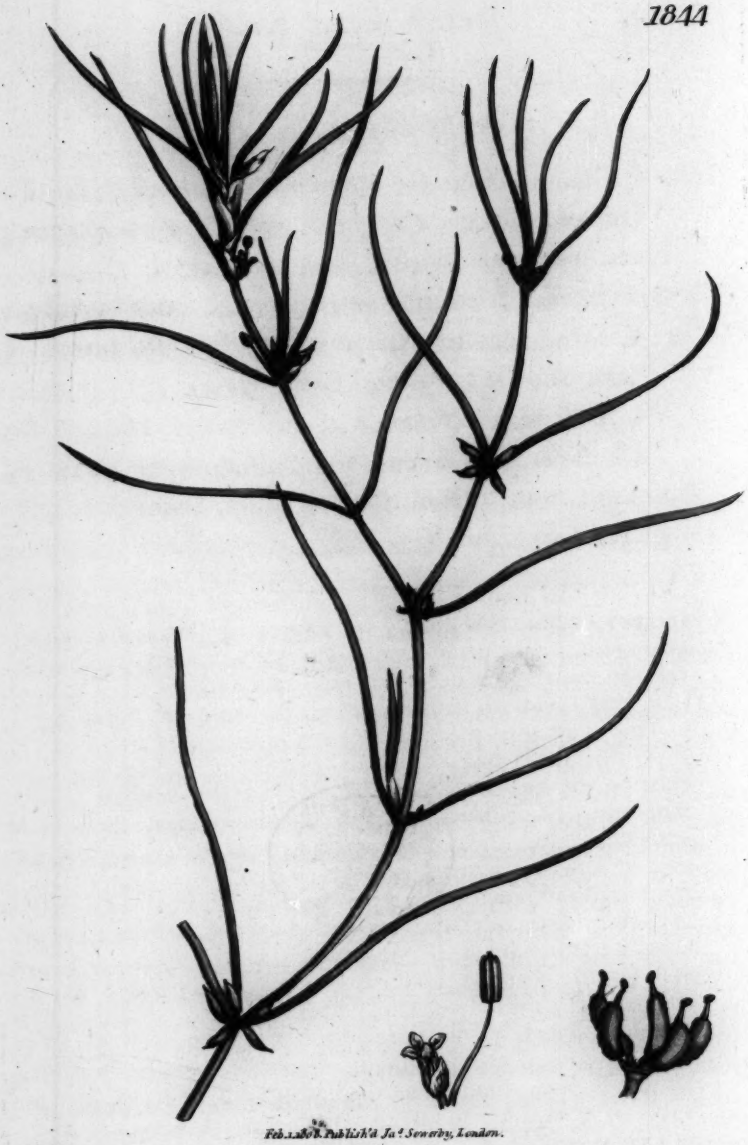
SYN. Trifolium striatum. *Linn. Sp. Pl.* 1085. *Sm. Fl. Brit.* 790. *Huds.* 327. *With.* 649. *Hull.* 163. *Relh.* 288. *Sibth.* 230. *Abbot.* 163.

T. parvum hirsutum, floribus parvis dilutè purpureis, in glomerulis mollioribus et oblongis, semine magno. *Raii Syn.* 329. *t.* 13. *f.* 3.

A NATIVE of dry barren and sandy pastures, flowering in June, and known from several species of Trefoil, which otherwise resemble it, by its downy softness to the touch.

Root annual, bearing small knotty swellings, such as we have often mentioned in other diadelphous plants. Stems procumbent, various in length and luxuriance, round, branched, often zigzag, downy. Leaflets obovate, or obcordate, finely toothed, downy. Stipulas ovate, broad, pointed, somewhat membranous between the ribs. Heads generally terminal, ovate. Calyx elliptical and swelling, hairy, with ten deep furrows, and five green, tapering, fringed teeth, lengthened out after flowering. Corolla of a pale rose-colour, about as long as the calyx. Pod membranous, with the rudiments of 2 seeds when young, one of which only is ripened, and becomes thrice as large as that of *T. glomeratum*, *t.* 1063.





Feb.ry 1.st 1803. Publish'd by Jn.o Sowerby, London.

ZANNICHELLIA palustris.

Horned Pondweed.

MONOECIA Monandria.

GEN. CHAR. Male, *Cal.* none. *Cor.* none. *Stam.* Filament solitary, elongated, erect: *anther* ovate, erect. Female, *Cal.* of 1 leaf. *Cor.* none. *Germens* 4 or more. *Seeds* as many, stalked. *Stigmas* peltate.

SPEC. CHAR. Anther of four cells. Stigmas entire.

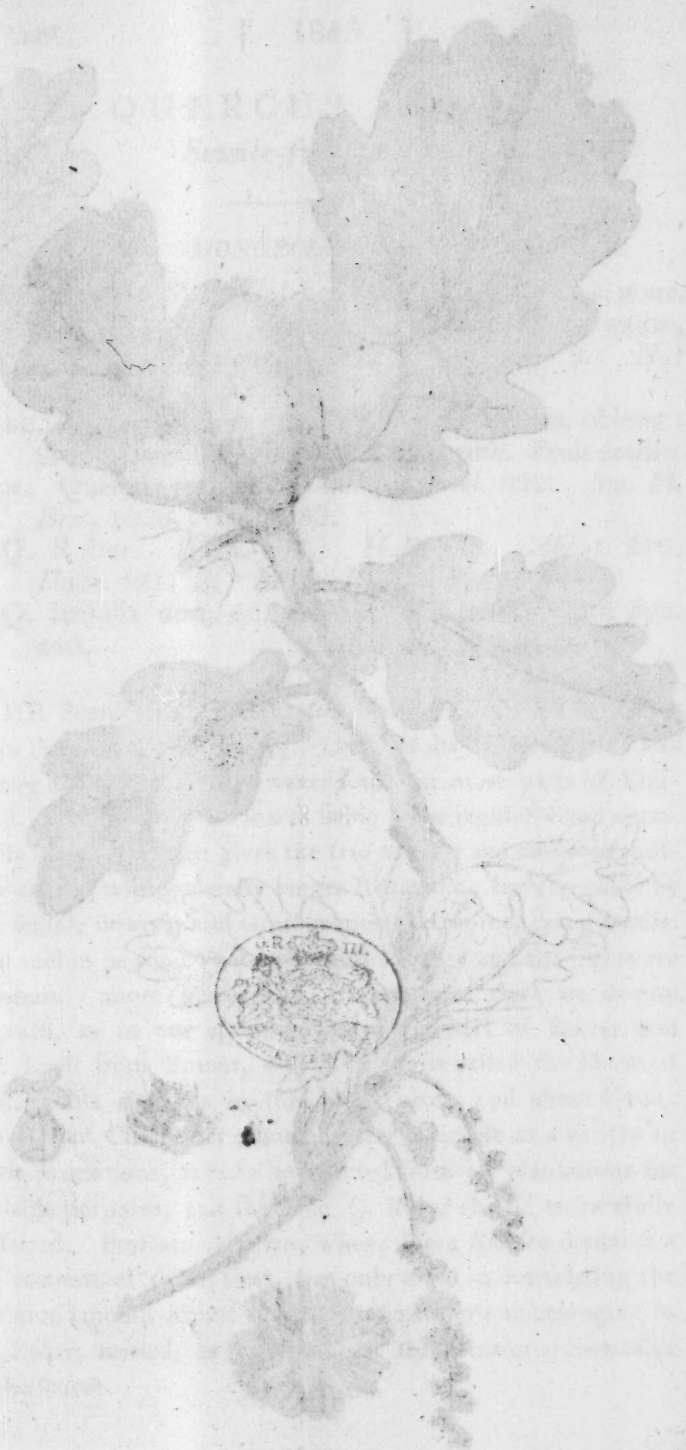
SYN. Zannichellia palustris. *Linn. Sp. Pl.* 1375. *Sm. Fl. Brit.* 955. *Huds.* 397. *With.* 6. *Hull.* 202. *Relh.* 358. *Sibth.* 3.

Aponogeton aquaticum graminifolium, staminibus singularibus. *Raii Syn.* 135.

MICHELI named this genus in honour of a Venetian apothecary, whom he greatly celebrates for his knowledge and zeal with regard to natural history, especially marine plants and animals. He describes two species, one of which only has been met with in Britain.

This is an annual plant, occurring in ponds and ditches, as in Tothill fields and many other places, in the summer season, floating in the water, but rising to the surface when in blossom. Stem threadshaped, slender, repeatedly branched, smooth, leafy. Leaves opposite or somewhat whorled, linear, narrow, acute, entire, grassy. Bractea axillary, tubular, membranous, including a pair of flowers; the male consisting of a long stamen and 4-celled anther, without calyx or corolla; the female of an oblique bell-shaped calyx, on a stalk, with 4 or 5 stalked, oblong, compressed germens, rugged or toothed at their backs. Styles short. Stigmas peltate, dilated, with entire edges.

The other species, found in mountain ponds, is described by Micheli as having toothed stigmas, and, what is much more remarkable, an anther with only two cells. Such a difference would in most cases be sufficient to afford a generic distinction, but here it is evidently only a specific one. See remarks on this subject in *Introduction to Botany*, 362.



Feb. 1808. Published by Jas. Sowerby London.

QUERCUS sessiliflora.
Sessile-fruited Oak.

MONOECIA Polyandria.

GEN. CHAR. Male, *Cal.* bell-shaped, lobed. *Cor.* none. *Stam.* 5—10. Female, *Cal.* bell-shaped, entire, rough. *Cor.* none. *Style* 1. *Stigmas* 3. *Nut* superior, leathery, with 1 seed.

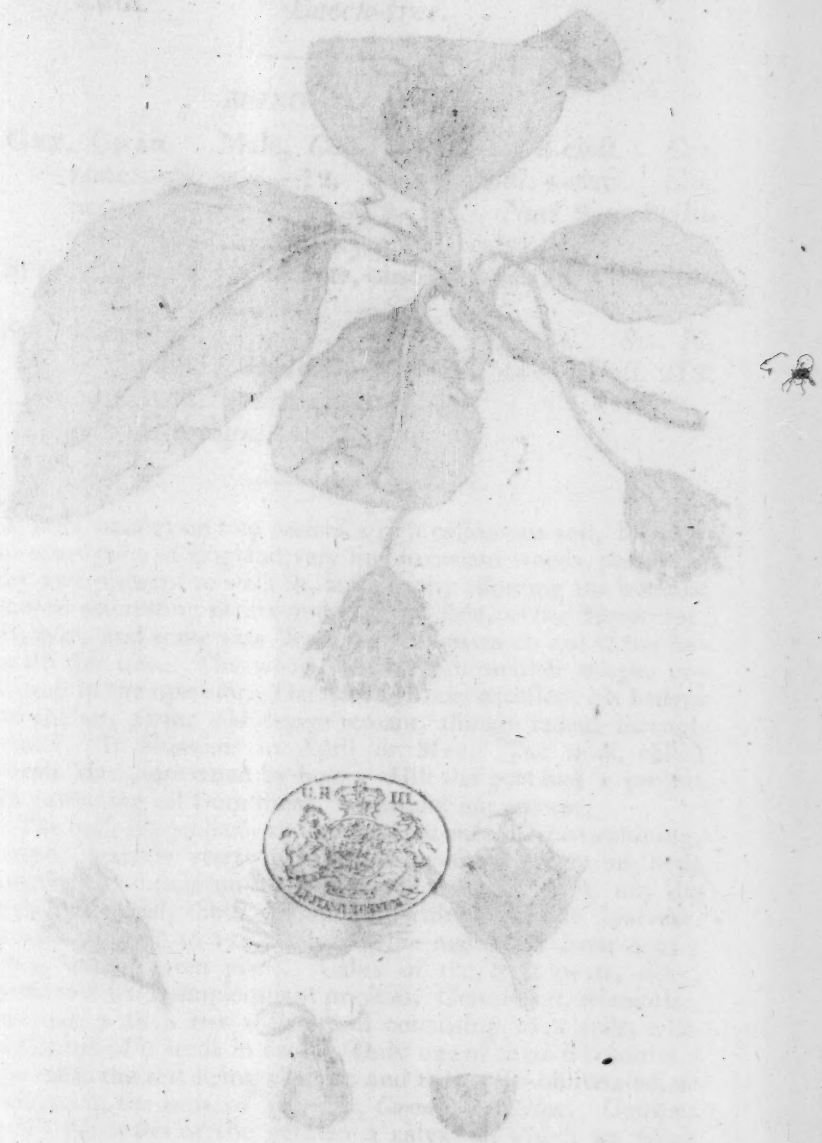
SPEC. CHAR. Leaves on footstalks, deciduous, oblong: their sinuses opposite and rather acute. Fruit sessile.

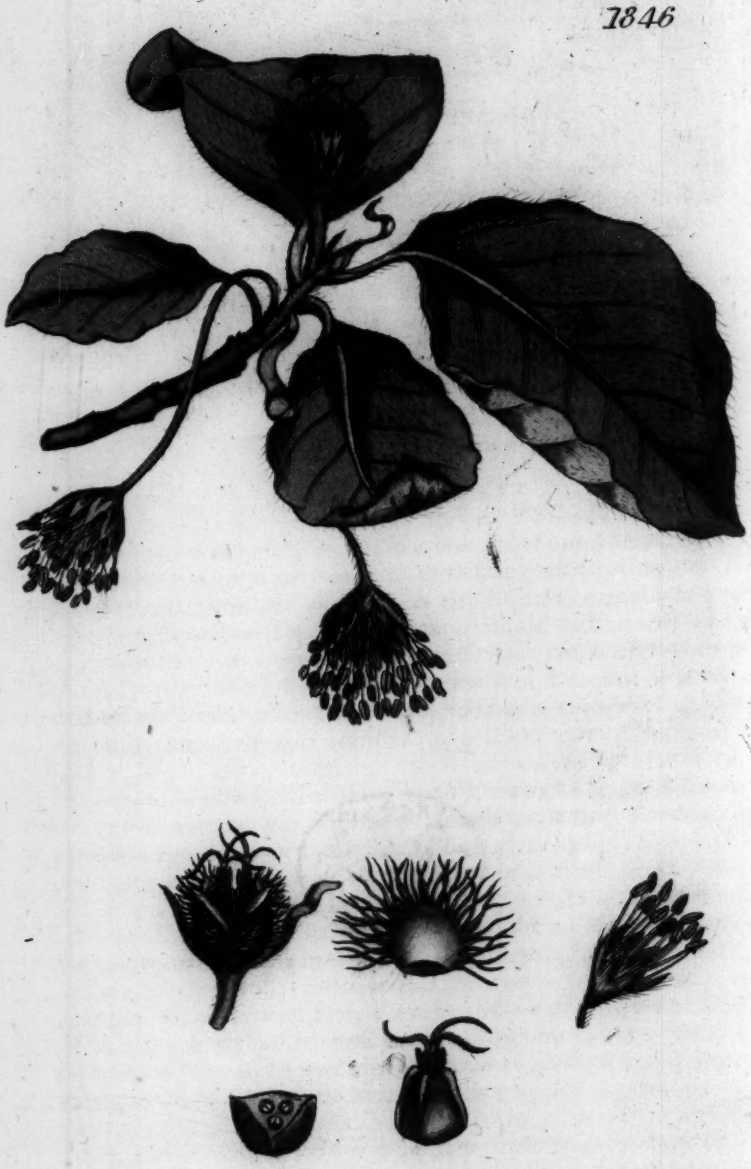
SYN. Quercus sessiliflora. *Salisb. Prod.* 392. *Sm. Fl. Brit.* 1026. *Galp.* 80.

Q. Robur. *With.* 387. *Hull.* 212. *Abbot.* 210. *Huds.* 421, β. *Mart. Rust. t.* 11, 12.

Q. latifolia mas, quæ brevi pediculo est. *Raii Syn.* 440.

THE Sessile-fruited Oak, fortunately much less common than the true British Oak, *t.* 1342, as its timber is far less strong and durable, is however found in most parts of England. It is known by its leaves being more regularly and oppositely sinuated, which gives the tree a neater and more chesnut-like aspect, with generally longer footstalks; but especially by the female flowers, and consequently the acorns, being sessile. It is said to be somewhat later in flowering, and the leaves are commonly more permanent. Sometimes they are downy beneath, as in our specimens sent by Mr. W. Borrer and Mr. Lyell from Sussex, which variety is called the Durmast Oak. This abounds in the New Forest, and about Goodwood near Chichester; but however desirable as a variety in home plantations, it is to be rejected from all plantations for valuable purposes, and the true *Q. Robur* should be carefully preferred. Professor Martyn, whose *Flora Rustica* contains a full account of these trees, has only erred in considering the common smooth-leaved state of *Q. sessiliflora* as belonging to the *Robur*, misled, as it seems, by the occasional footstalks of the leaves.





Feb. 1.1808. Published by Jas. Sowerby, London.

FAGUS sylvatica.

Beech-tree.

MONOECIA Polyandria.

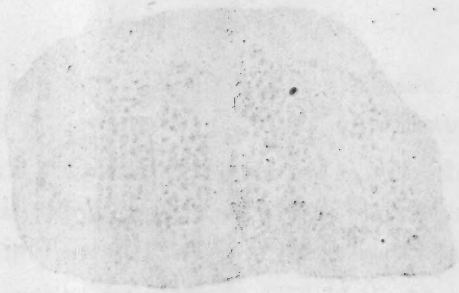
GEN. CHAR. Male, *Cal.* bell-shaped, 5-cleft. *Cor.* none. *Stam.* 5—12. Female, *Cal.* 4-cleft. *Cor.* none. *Styles* 2 or 3, 3-cleft. *Nuts* 2 or 3, invested with the leathery prickly calyx.

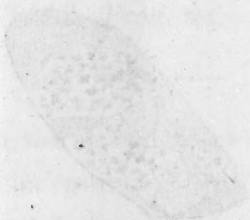
SPEC. CHAR. Leaves ovate, obsoletely serrated. Prickles of the fruit simple.

SYN. Fagus sylvatica. *Linn. Sp. Pl.* 1416. *Sm. Fl. Brit.* 1028. *Huds.* 422. *With.* 444. *Hull.* 213. *Sibth.* 152. *Abbot.* 210.
Fagus. *Raii Syn.* 439.

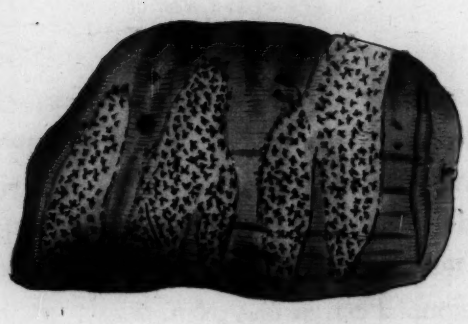
THIS handsome tree prefers a rich calcareous soil, forming in many parts of England very fine luxuriant woods, peculiarly dry and pleasant to walk in, and usually affording the botanist several interesting plants under their shade, as the *Monotropa*, *Pyrolæ*, and some rare *Orchideæ*. Grasses do not thrive beneath this tree. The wood is hard, but neither tough, nor lasting in the open air. The Beech makes excellent cut hedges for shelter, as the old leaves remain, though faded, through winter. It blossoms in April or May. The nuts, called Beech Mast, are eaten by hogs. Hill the poet had a project for extracting oil from them, which did not answer.

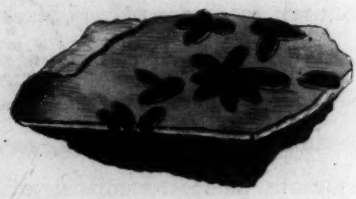
The bark is peculiarly smooth and beautiful. Leaves shining, waved, scarcely serrated, finely fringed. Flowers in little round hairy heads on long stalks, the female ones, not the male, terminal, both abounding with lanceolate bracteas. Stamens from 5 to 12. Calyx of the male with from 5 to 7 lobes, and a barren pistil. Calyx of the fruit ovate, silky, muricated with simple pliant prickles. Germens 2, triangular, crowned with a few scales, and consisting of 3 cells, with rudiments of 2 seeds in each. Only one of these 6 becomes a ripe seed, the rest being abortive and their cells obliterated, as happens in the nuts of *Quercus*, *Cornus* and *Olea*. Gærtner names the scales of the germen a calyx, in which we think him mistaken, but it is a point of some difficulty. His making the Chesnut, *t.* 886, a distinct genus, is one of those glaring errors of a great man, which should teach all naturalists caution, and more especially candour.





GEORGIUS III.
DEI GRATIA





Feb.1 1808 Published by Jas. Sowerby, London.

OPEGRAPHA astroidea.

Starry Opegrapha.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* in black, linear, sessile, simple or branched, bordered *clefts*, in an uninterrupted crust.

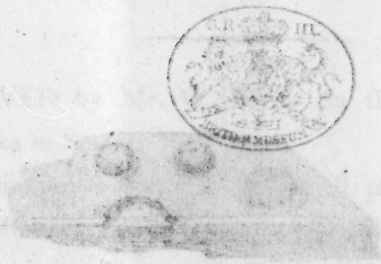
SPEC. CHAR. Crust limited, irregular, very thin, membranous, smooth, greenish white, somewhat shining. Clefts immersed, flattish, branching in a starry form.

SYN. Opegrapha astroidea. *Ach. Meth.* 25.
O. radiata. *Pers. in Ust. Ann. fasc.* 7. 29. *t.* 2. *f.* B, b.
Lichen astroites. *Ach. Prod.* 24.

VERY common on the smooth barks of trees, and when magnified a far from inelegant object.

The crust forms patches of various shapes, clearly limited, but not marked with any black edge. It is at first thin even and uninterrupted, generally white, or varying from a pale to a deeper olive. By age it divides and cracks, sometimes scaling off in little flakes, assisted by the protruding fructification. The latter consists of innumerable coal-black specks, more or less regularly radiating like stars, sometimes only three-cleft like a bird's claw. They are white internally, but very black in all their external surface as well as sides.

Professor Acharius has lately, we understand, constituted, in Schrader's *Journal*, a new genus called *Arthonia*, into which, whether it be a good genus or not, we presume to think he has improperly admitted this species.


G.R. III.
BRITISH MUSEUM

1848.

Feb.1.1848. Published by Jas. Sowerby, London.

LICHEN analeptus.

Little Dotted-tubercled Lichen.

CRYPTOGAMIA Algæ.

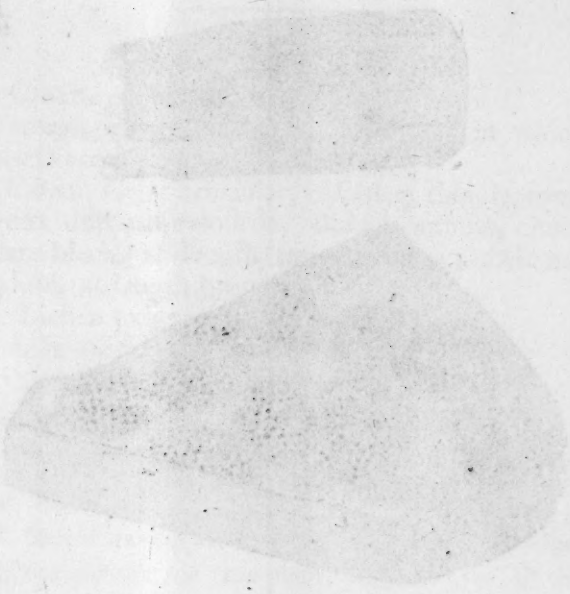
GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust determined, very thin, smooth, shining, pale copper-coloured. Tubercles scattered, black, hemispherical, with a central dot.

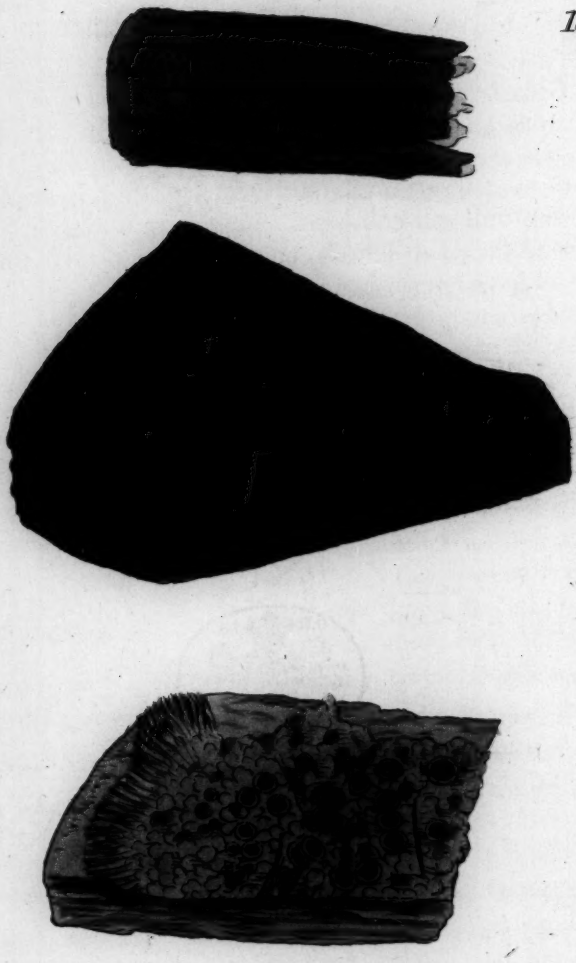
SYN. Lichen analeptus. *Ach. Prod.* 15.
Verrucaria analepta. *Ach. Meth.* 119.

OBSERVED by Mr. W. Borrer on the smooth bark of young oaks in Sussex.

This minute vegetable forms small patches, their crust being so thin that the dark red of the bark appears through it, heightening the olive copper-like hue of the crust. By age the latter nearly vanishes. Its surface is smooth and polished; its edge determined, but not bounded by any coloured line. Tubercles minute, regularly sprinkled over the crust, (not clustered,) black, hemispherical, marked at the top with a small depression.



G.R
III.



Published by Jas. Sowerby, London.

LICHEN exiguus.

Diminutive Black-shielded Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

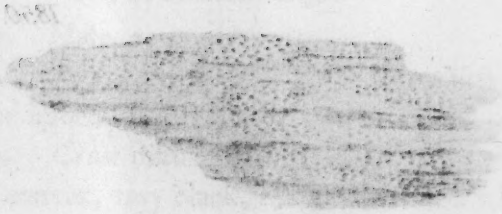
SPEC. CHAR. Crust orbicular, radiating, thin, leprous, uneven, dull ash-coloured. Shields minute, clustered, flat, black, at length rather convex; their margin white, at length brownish.

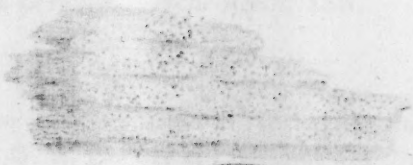
SYN. Lichen exiguus. *Ach. Prod.* 69.
Parmelia exigua. *Ach. Meth.* 154.

WE have at *t.* 1791 expressed some doubts about the *L. exiguus* of Acharius, which arose from his specimens; but Mr. W. Borrer having lately sent us from Sussex what appears by comparison the true plant, we shall give all the information in our power concerning it. Mr. Turner finds the same on old pales about Yarmouth.

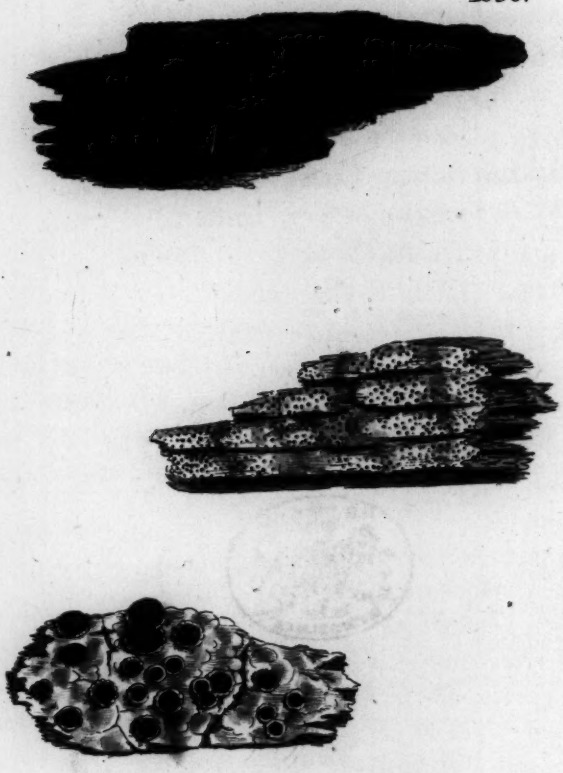
On old tiles the crust is seen in most perfection, forming small circular patches, very thin, of a dull brownish ash-colour, leprous and uneven, not tartareous, encircled with a fibrous radiating margin unnoticed by Acharius. Shields minute, numerous, crowded, black, flat when young, with a very distinct smooth whitish border. By age the border becomes brown, but we cannot observe that it disappears. The disk grows convex when old.

From the most mature examination of original specimens, it appears evident to us that *L. pyrinus* of Acharius is this very plant, and by no means a variety of *sophodes*, and further, that *L. abietinus* of Ehrhart is the *pericleus*, *t.* 1850. The figure in the Stockholm Transactions for 1795, *t.* 5. *f.* 6, d, e, f, seems rather *sophodes*, *t.* 1791, which is intermixed with Dr. Acharius's own specimens of *exiguus*, and perhaps led him to cite that figure under it.





1850.



Feb.1 1808, Published by Jas. Sowerby, London.

LICHEN pericleus.

Rough Black-shielded Lichen.

CRYPTOGAMIA Algæ.

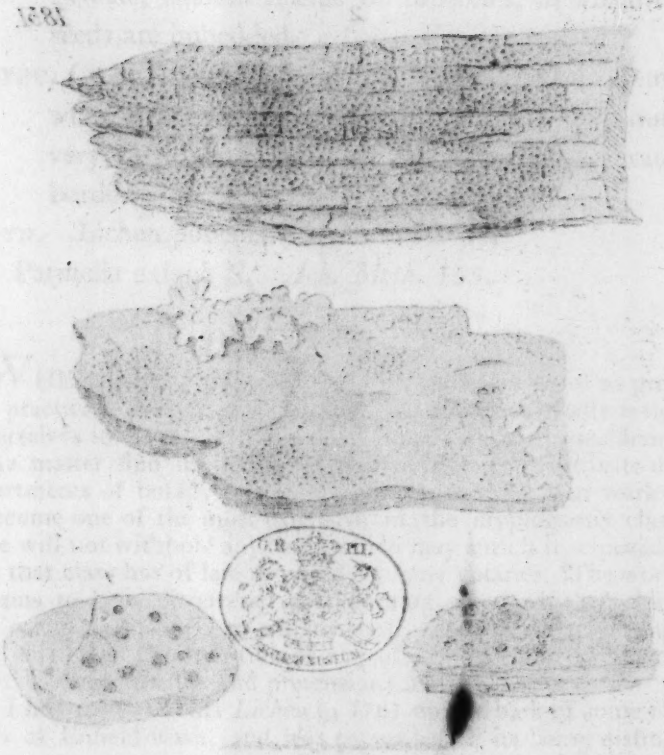
GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

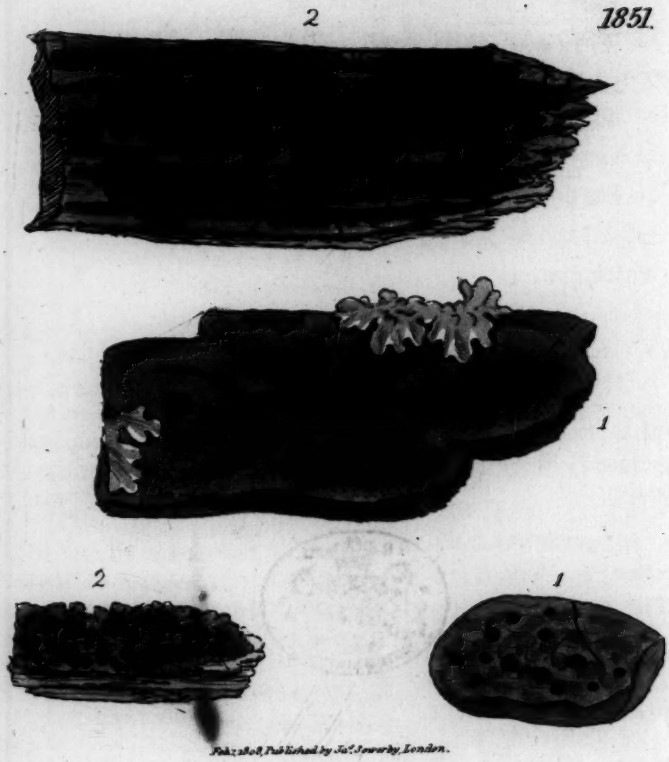
SPEC. CHAR. Crust diffuse, thin, leprous, very white. Shields convex, very black, roughish, with a white, crenate, at length powdery, border.

SYN. Lichen pericleus. *Ach. Prod.* 78.
L. abietinus. *Ehrh. Crypt.* 166.
Parmelia periclea. *Ach. Meth.* 156.

FOUND by Mr. W. Borrer at Hurst-pierpoint, Sussex, and by the Rev. G. R. Leathes at Livermere near Bury. It grows sometimes on old posts or pales, sometimes on the bark of firs, as in specimens from Acharius, Swartz and Ehrhart, all which we have diligently compared, and have therefore presumed to make a correction with regard to the latter.

We further presume that this is a very distinct and well-determined species, admirably defined by the eminent writer first mentioned. The crust is very thin, spreading irregularly without any well-marked border, pure white, not tartareous nor powdery. We do not find upon ours those brownish-green parasitical tufts mentioned in the *Methodus Lichenum*, and which are visible on all our foreign specimens. The shields are, in our English specimens, scarcely larger than those of the *exiguus;* but they are peculiarly black, convex, and distinguished by being roughish, though they do not stain the finger like those of *L. inquinans*, *t.* 810. Their border is very white, crenate, becoming powdery by age, and, as it were, mouldering away into the circumjacent crust.




2
1851.
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LICHEN pinicola.

Pine-bark Black-shielded Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.

Female, smooth shields or tubercles, in which the seeds are imbedded.

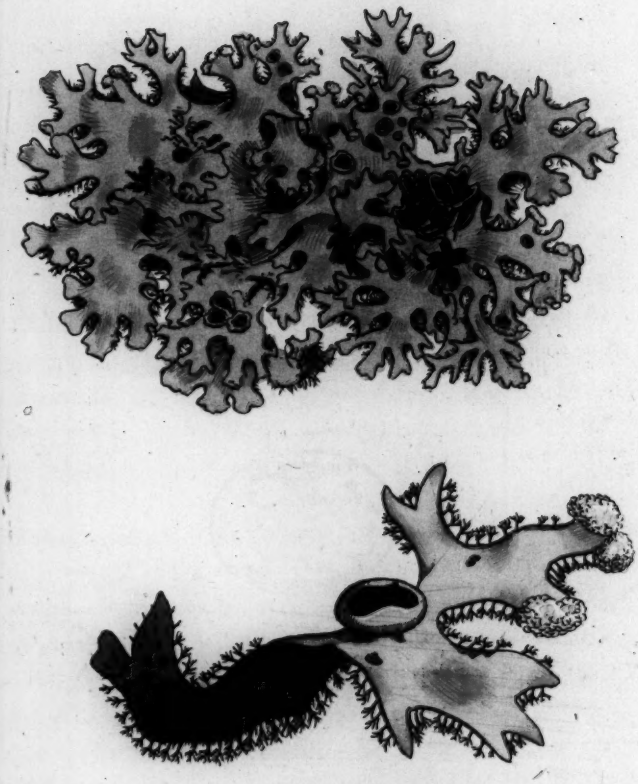
SPEC. CHAR. Crust diffuse, thin, brownish white, somewhat tartareous. Shields numerous, very minute, very black, opaque, with a black, smooth, elevated border.

SYN. Lichen pinicola. *Ach. Prod.* 66.

Parmelia exigua β. *Ach. Meth.* 155.

WHEN we venture to dissent from the opinion of so great a practical observer as Professor Acharius, we gladly resign ourselves to his correction in case he should on reconsidering the matter find us in the wrong. In the more intricate departments of botany any aid is welcome; and as our work is become one of the most extensive in the cryptogamic class, we will not withhold any thing which may enrich it, especially as that class has of late acquired so many votaries. The world seems to have discovered that nothing about which Infinite Wisdom has deigned to employ itself, can, properly speaking, be unworthy the attention of any of its creatures, how lofty soever their pursuits and pretensions may be.

I first gathered this *Lichen* in 1791 on the bark of some old firs at Enfield wash, and was persuaded of its being distinct from *parasemus*, *t.* 1450, the only species with which it still seems to me to have much affinity. I have no doubt that the remark in the *Methodus* of Acharius indicates the true source of his error in referring this species to *exiguus*, from which I have always found it essentially different, (even generically so according to his own principles,) in having a black border only to the shields, of the substance of their disk. Its minuteness distinguishes it from *parasemus*, but especially the thin brownish crust. It is not a rare plant. Mr. W. Borrer has sent a more scaly variety, as he judges, which is frequent on barns.



Feb.1.1808. Published by Jas. Sowerby, London.

LICHEN lævigatus.

Even Grey Lichen.

CRYPTOGAMIA Algæ.

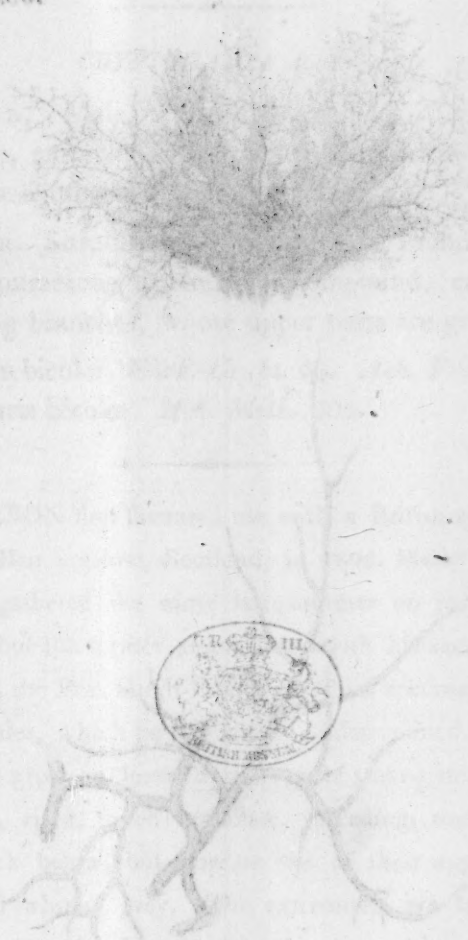
GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

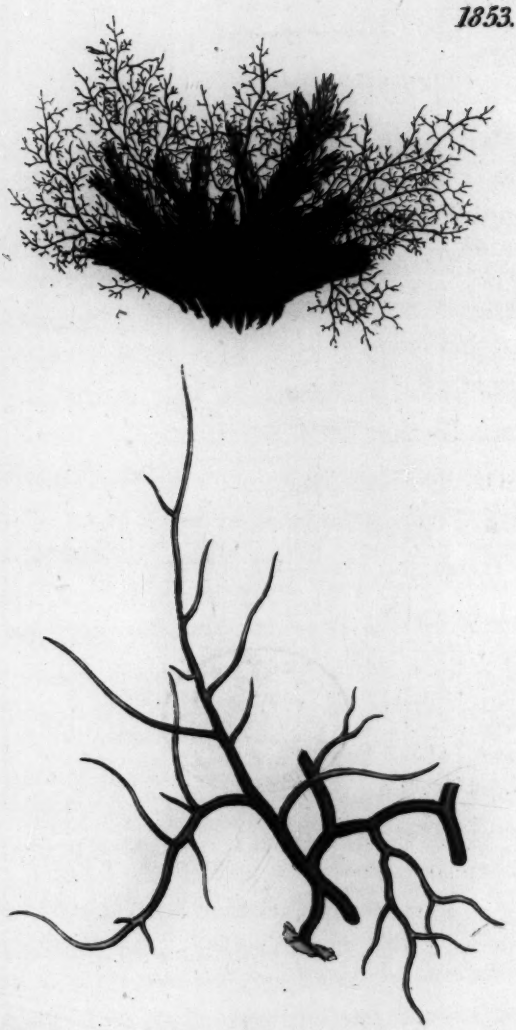
SPEC. CHAR. Leafy, slightly imbricated, greyish white, very smooth even and veinless, with terminal warts; its segments linear and acute: black and shaggy beneath. Shields chesnut.

THIS elegant and remarkable Lichen, of which we can meet with no description nor figure, was discovered on rocks in Anglesea and Caernarvonshire, by our often-mentioned friend the Rev. Hugh Davies, to whom alone we are indebted for specimens.

It forms loose flat patches. The fronds are loosely imbricated, entangled with mosses, &c., cut into narrowish, linear, though somewhat dilated and fan-shaped, segments, whose terminal lobes are divaricated and acute. The upper surface is of a pale whitish unchangeable grey, peculiarly smooth and even, without veins, pits, or warts, the latter only occurring, of large size, at the ends of some of the lobes. The under surface is black, shaggy with strong, branched, coal-black hairs. Shields scattered, not large, concave, chesnut-coloured, with a smooth border like the crust. They easily break, from age or accident.

It seems to us that this species has more natural affinity to *physodes*, *t.* 126, than to *tiliaceus*, *t.* 700, *saxatilis*, *t.* 603, or *perlatus*, *t.* 341.





Feb.1.1808.Published by Jas Sowerby, London.

LICHEN bicolor.

Black and grey Shrubby Lichen.

CRYPTOGAMIA Algæ.

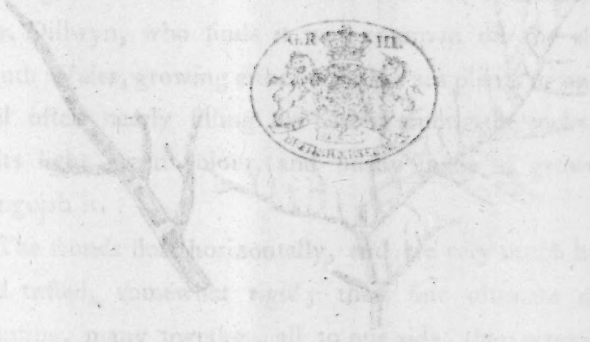
GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

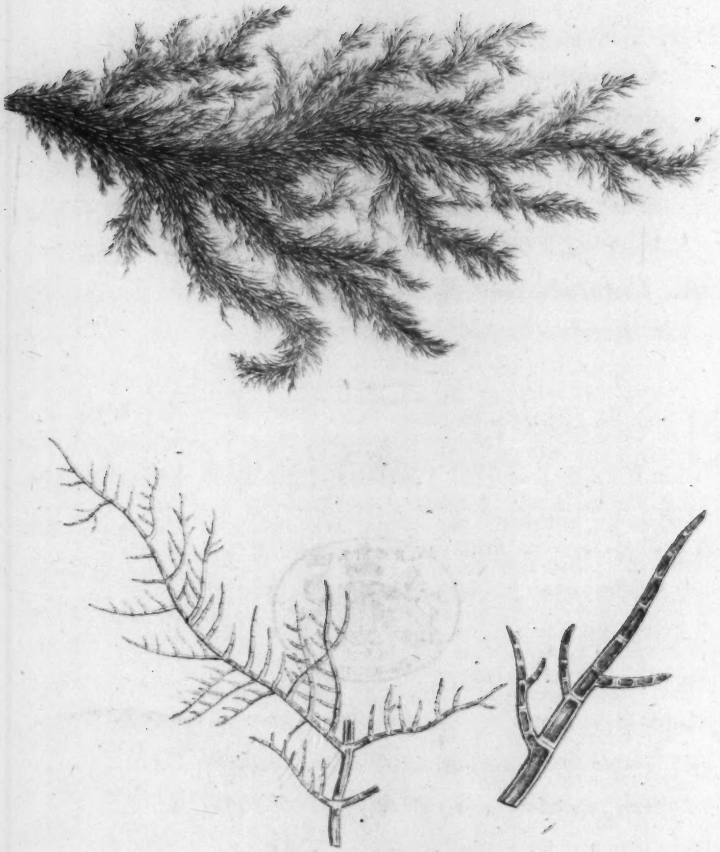
SPEC. CHAR. Shrubby, solid, erect, rigid, round, black, with numerous, spreading, compound, capillary, tapering branches, whose upper parts are grey.

SYN. Lichen bicolor. *Ehrh. Crypt.* 40. *Ach. Prod.* 215.
Cornicularia bicolor. *Ach. Meth.* 304.

MR. DICKSON first favoured me with a British specimen of this from Ben y Glow, Scotland, in 1802. Messrs Turner and Hooker gathered the same last summer on rocks near Taymouth; but the former assures me, with his accustomed candour, that the Rev. Hugh Davies sent him specimens long ago from Wales, which he had laid by undetermined.

The fronds grow in loose upright tufts among moss, and are capillary, rigid, much branched, spreading, round and smooth; black below, but more or less of their upper parts are of a dull whitish grey. The extremities are tapering, acute, often curved. No fructification has yet been found. Our specimens accord precisely with those of Ehrhart and Acharius.





Pub. 1 Dec. 1808 Published by Jas. Sowerby, London

CONFERVA lætè-virens.

Light-green Bushy Conferva.

CRYPTOGAMIA Algæ.

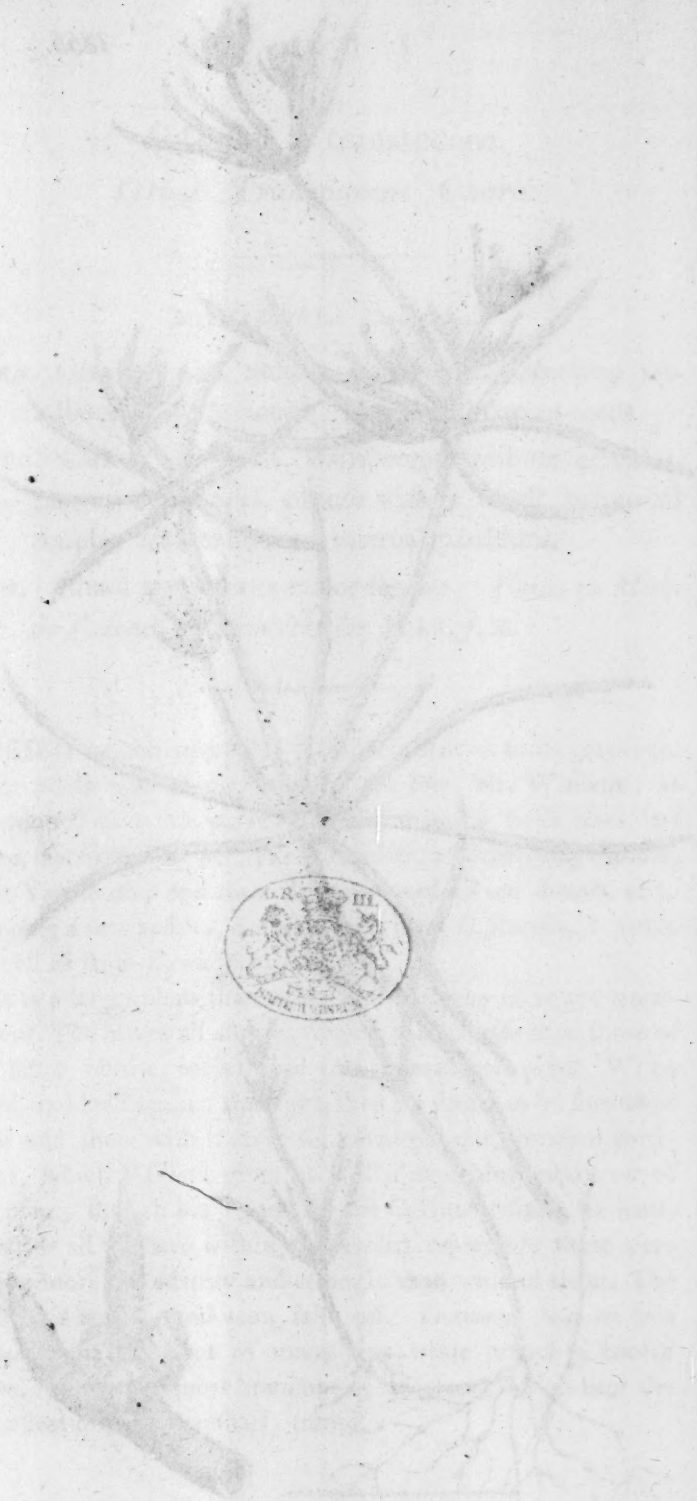
GEN. CHAR. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

SPEC. CHAR. Bright pale green, much branched, rather rigid; ultimate divisions pointing to one side. Joints thrice as long as broad, with pellucid partitions.

SYN. Conferva lætè-virens. *Dillw. Conf. t.* 48. *Wood in Rees's Cyclop. n.* 72.

SENT by Mr. W. Borrer, in July last, fresh from the sea at Brighthelmston. It was first observed and described by Mr. Dillwyn, who finds it very common on the shores of South Wales, growing either on other sea plants or on stones, and often nearly filling the basons among the rocks, where "its light green colour, and bushy mode of growth," distinguish it.

The fronds float horizontally, and are very much branched and tufted, somewhat rigid; their fine ultimate divisions pointing, many together, all to one side, then several to the other side. The joints are about thrice as long as broad, cylindrical, with pellucid partitions. No fruit has been as yet detected.



CHARA translucens.

Great Transparent Chara.

MONANDRIA Monogynia.

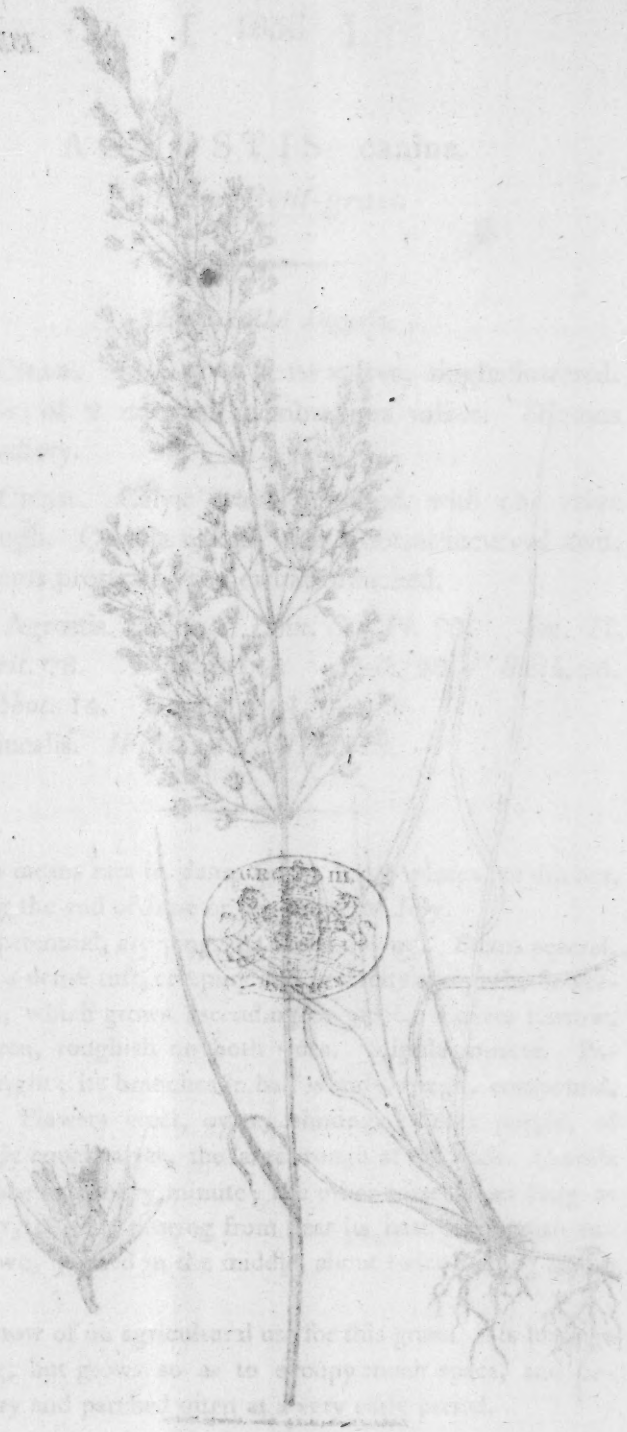
GEN. CHAR. *Cal.* none. *Cor.* none. *Anthera* tessellated. *Style* none. *Berry* with many seeds.

SPEC. CHAR. Smooth, transparent, without prickles. Leaves cylindrical, obtuse with a small point, all simple, with transverse internal partitions.

SYN. Chara translucens major flexilis. *Vaill. in Mem. de l'Acad. des Sciences for* 1719, *f.* 8.

DRIED specimens of this plant were sent us some years ago, from pools near Shrewsbury, by the Rev. Mr. Williams, as mentioned in *v.* 15. *p.* 1070. We received fresh ones last June, discovered by Mr. W. J. Hooker, at Browston, Suffolk, near Yarmouth; and these have removed all our doubts as to its being a new species, quite distinct from *C. flexilis*, *t.* 1070, as well as from *C. nidifica*, *t.* 1703.

It is a larger plant than either of those, very clear and transparent. The leaves all simple, thicker and shorter than those of the latter, obtuse, each tipped with a small pale point. When dried, and held against the light, they are found to be furnished here and there with transverse, often oblique, internal partitions, which Vaillant gives as a distinguishing character of the plant, though his figure (in the German edition at least, which is all we have within our reach,) represents these partitions more abundantly and strongly than we find them. The anthera is sessile, and soon falls off. Germens one or two adjacent to it. Root of many fine white branched knotty fibres. The uppermost branches of the stem, which bear the fructification, are peculiarly tumid.



1856.

Published March 1, 1802 by James Sowerby, London.

AGROSTIS canina.

Brown Bent-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 acute valves, single-flowered. *Cor.* of 2 unequal membranous valves. *Stigmas* feathery.

SPEC. CHAR. Calyx ovate, coloured, with one valve rough. Corolla naked, with a dorsal incurved awn. Stems prostrate, somewhat branched.

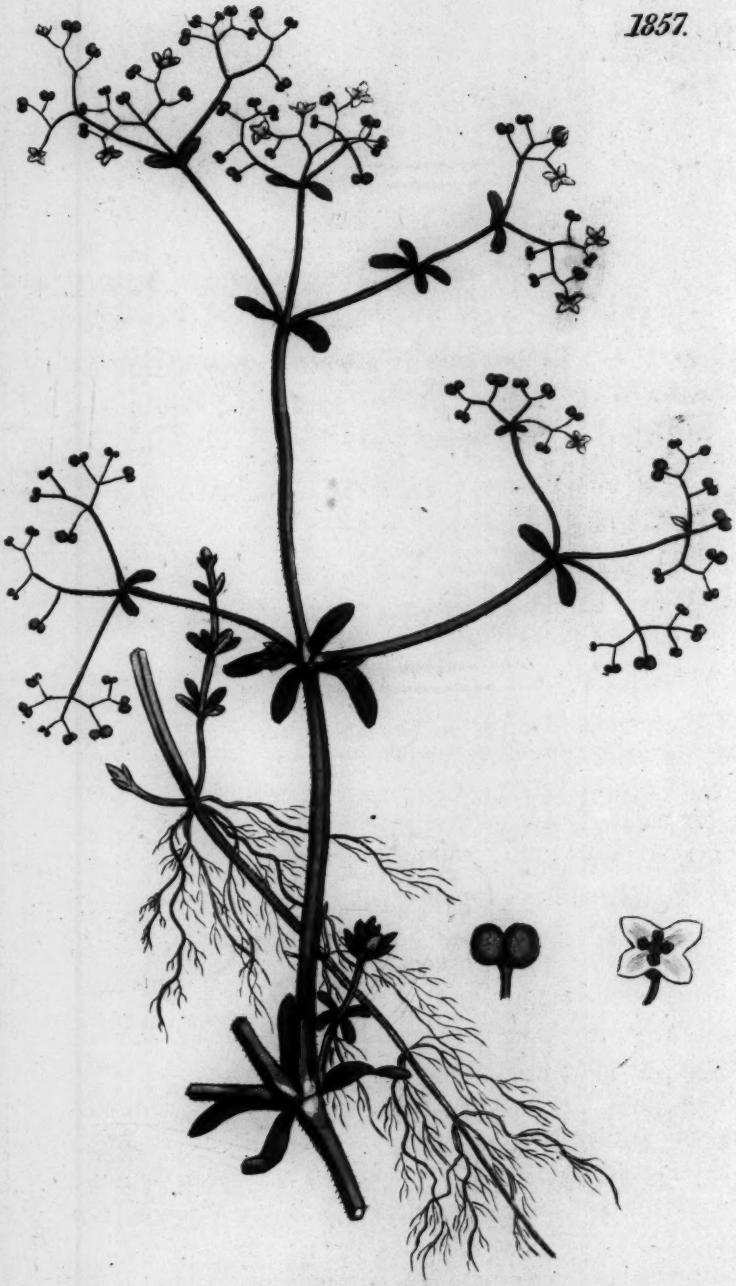
SYN. Agrostis canina. *Linn. Sp. Pl.* 92. *Sm. Fl. Brit.* 78. *Huds.* 30, α. *Relh.* 26. *Sibth.* 36. *Abbot.* 14. *Knapp t.* 21.
A. vinealis. *With.* 127. *Hull.* 18.

BY no means rare in damp fields, boggy places, or ditches, flowering the end of June or beginning of July.

Root perennial, creeping, its fibres downy. Stems several, forming a dense tuft, creeping and prostrate except the flowering part, which grows ascending or erect. Leaves narrow, light green, roughish on both sides. Stipula minute. Panicle upright; its branches in half whorls, rough, compound, slender. Flowers erect, ovate, shining. Calyx purple, of two nearly equal valves, the larger rough at the back. Corolla white; one valve very minute; the other scarcely so long as the calyx, cloven, bearing from near its base a brownish incurved awn, jointed in the middle, about twice as long as the valve.

We know of no agricultural use for this grass. Its herbage is trifling, but grows so as to occupy much space, and becomes dry and parched often at a very early period.

G.R.
III.



Published March 1.1802 by James Sowerby London.

GALIUM palustre.

White Water Bed-straw.

TETRANDRIA Monogynia.

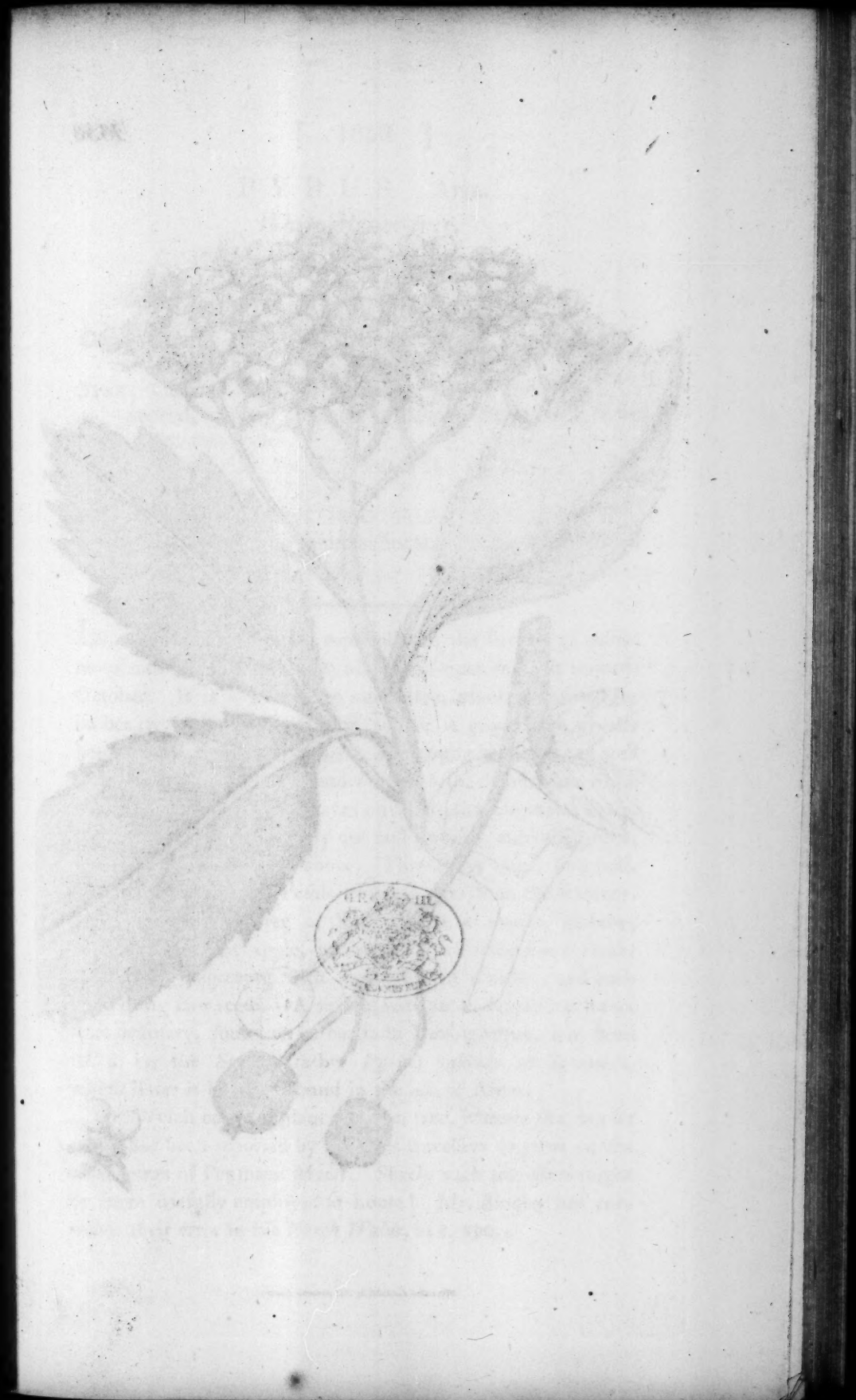
GEN. CHAR. *Cor.* of one petal, flat, superior. *Seeds* 2, roundish.

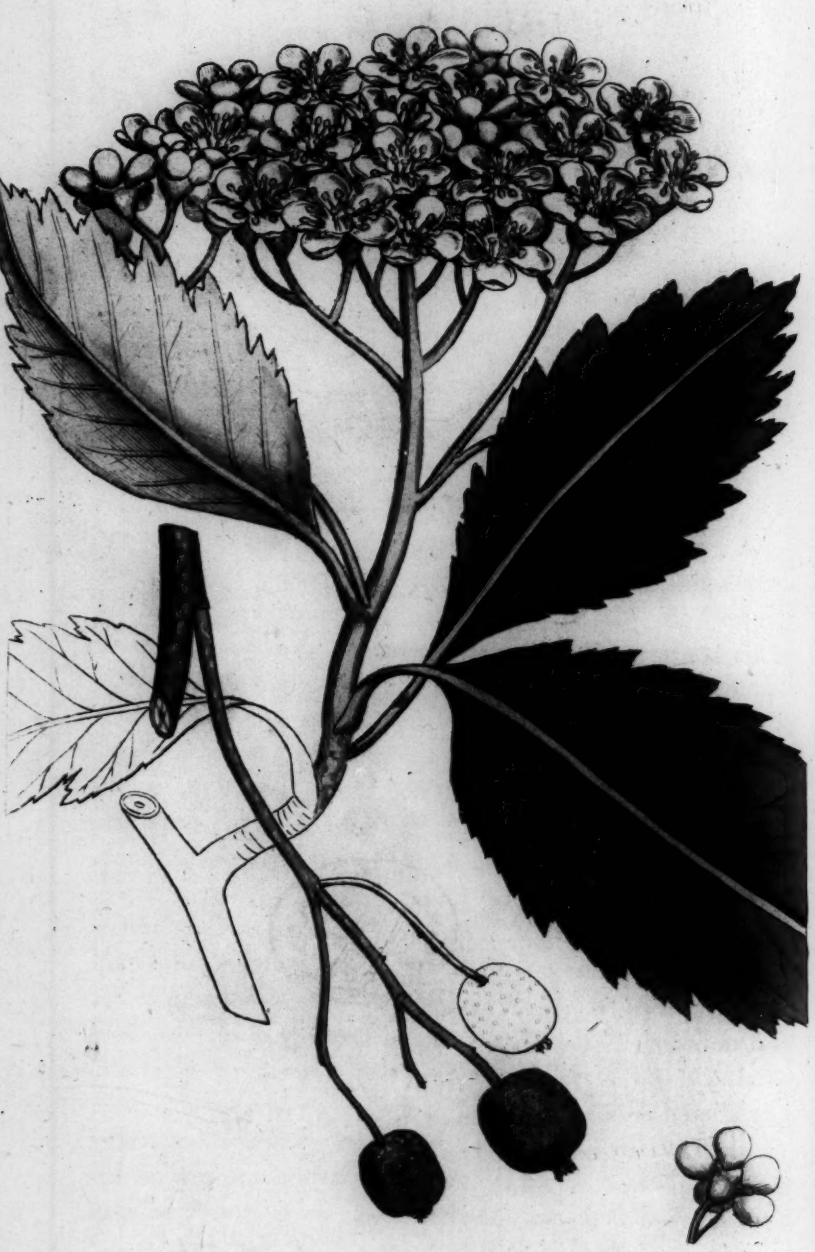
SPEC. CHAR. Leaves four in a whorl, obovate, obtuse, unequal in size. Stems weak and spreading, branched in their upper part.

SYN. Galium palustre. *Linn. Sp. Pl.* 153. *Sm. Fl. Brit.* 174. *Huds.* 67. *With.* 187. *Hull.* 35. *Relh.* 55. *Sibth.* 58. *Abbot.* 33.
Molluginis vulgatioris varietas minor. *Raii Syn.* 224.

VERY generally found in ditches among reeds, and umbelliferous, or other, tall water plants, on which its weak stems lean for support, and so rise to the height of 3 or 4 feet. Otherwise they are diffuse and of less extent. They are much branched, quadrangular, generally smooth, sometimes rough-edged. Leaves four in a whorl, spreading, linear inclining to obovate, obtuse, smooth, except the edges of the upper ones, which are rough, but not toothed nor serrated. It is peculiar to this species to have two opposite leaves smaller and two larger in the uppermost whorls. Flowers white, in large, loose, three-cleft and somewhat umbellate panicles, with two leaves only at their base, and merely a small solitary one occasionally higher up. Stalks smooth. Calyx scarcely any. Segments of the corolla broad, acute, but not pointed nor awned. Fruit small, dotted, not rough, rarely perfected.

The roots are perennial and somewhat creeping. The flowers last throughout July and August.





Mar. 1.1818. Published by Jas. Sowerby London.

PYRUS Aria.

White Beam-tree.

ICOSANDRIA Pentagynia.

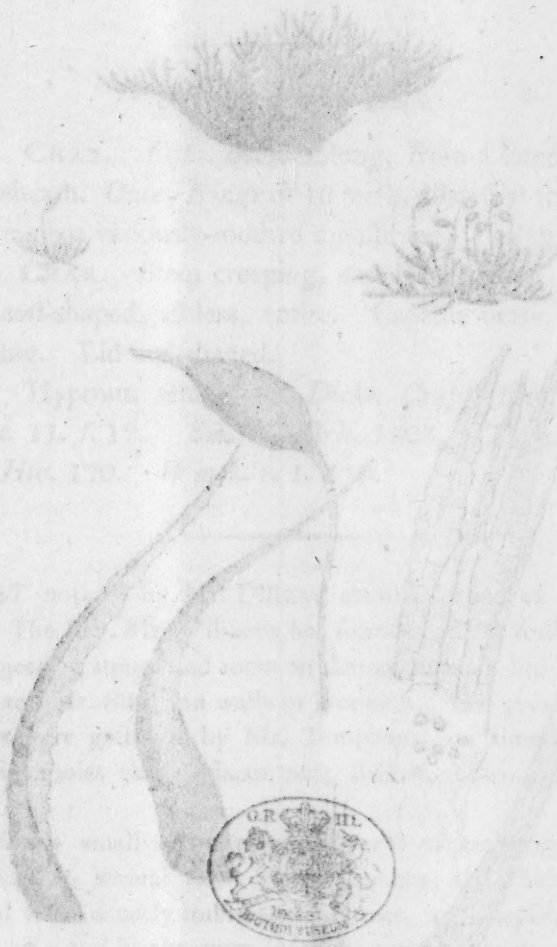
GEN. CHAR. *Cal.* 5-cleft. *Petals* 5. *Apple* inferior, of from 2 to 5 cells. *Seeds* in pairs.

SPEC. CHAR. Leaves simple, ovate, cut, serrated, scored, downy beneath. Flowers corymbose, with about two styles.

SYN. Pyrus Aria. *Sm. Fl. Brit.* 534. *Winch. v.* 1. 47.
Cratægus Aria. *Linn. Sp. Pl.* 681. *Huds.* 214. *With.* 458. *Hull.* 109. *Sibth.* 155. *Abbot.* 108.
Mespilus alni folio subtùs incano, Aria Theophrasti dicta. *Raii Syn.* 453.

IN mountainous woods, especially in the fissures of calcareous rocks, flowering about May, and ripening fruit towards October. It is a handsome small tree, much cultivated for its beauty in home plantations, where it grows to a greater height than on its native hills. The young branches, as well as the stalks, calyx, and under side of the leaves, are white with a mealy hoariness. Leaves on footstalks, alternate, ovate, acute, doubly and irregularly cut and serrated, smooth, green, with straight sunk veins above. Flowers in large, terminal, compound corymbs. Petals white, longer than the stamens. Styles two, often three or four. Fruit a scarlet, globose, mealy, astringent apple, whose cells are coriaceous rather than horny, agreeing with the styles in number, and each containing two seeds.—A variety with more deeply cut leaves than ordinary, found on a castle in Denbighshire, has been taken for the *Sorbus* (rather *Pyrus*) *hybrida* of Linnæus, which latter is however found in the isle of Arran.

The Welch call this plant a lemon tree, whence that tender exotic has been reported by ignorant travellers to grow on the bleak crags of Penmaen Mawr. Surely such travellers might be more usefully employed at home! Mr. Bingley has corrected their error in his *North Wales, v.* 2. 390.


G.R. III.
BRITISH MUSEUM

May 1.1808. Published by Jas. Sowerby London.

HYPNUM tenellum.

Tender Awl-leaved Feather-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* ovate-oblong, from a lateral scaly sheath. *Outer fringe* of 16 teeth, dilated at the base: *inner* a variously-toothed membrane. *Veil* smooth.

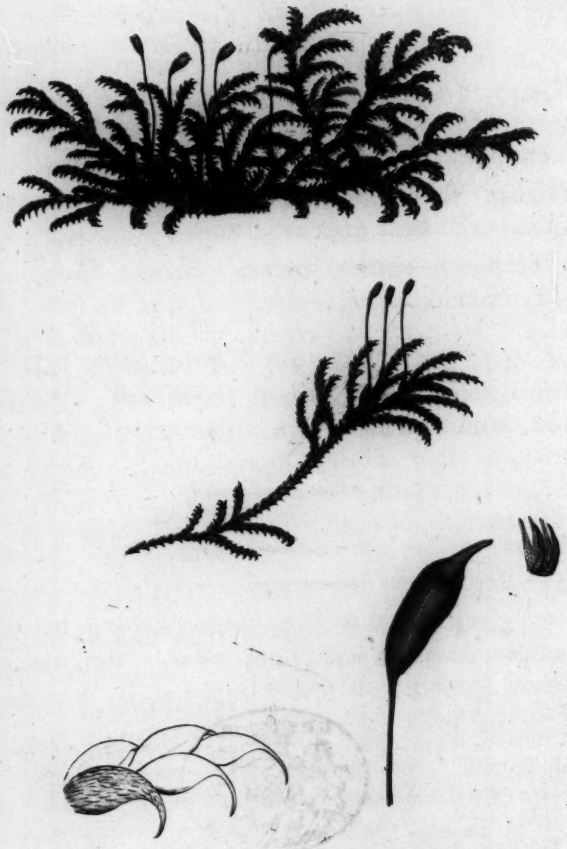
SPEC. CHAR. Stem creeping, much branched. Leaves awl-shaped, ribless, entire. Capsule ovate, drooping. Lid awl-shaped.

SYN. Hypnum tenellum. *Dicks. Crypt. fasc.* 4. 16. *t.* 11. *f.* 12. *Sm. Fl. Brit.* 1308. *Turn. Musc. Hib.* 170. *Winch. v.* 1. 110.

FIRST noticed by Mr. Dillwyn about the roots of trees in Kent. The Rev. Mr. Williams has found it on the under sides of projecting stones and roots on Acton Burnell hill Shropshire, and Mr. Stone on walls in Norwich. Our present specimens were gathered by Mr. Templeton, on limestone or flint, in moist shady places near Belfast, bearing fruit in April.

It forms small dense perennial tufts of creeping stems, throwing up several short erect branches; the whole being clothed with densely imbricated, slender, awl-shaped, entire leaves, of a full bright green, without any rib, except possibly near the base. Stalks from minute sheaths, red, half or three quarters of an inch long, erect, taller than the branches, at length curved at the summit. Capsule drooping or pendulous, ovate, short, obtuse, brown, smooth, with an awl-shaped lid, about its own length. The fine slender leaves essentially distinguish this species. Neither Hedwig, nor any other foreign botanist, seems to have known it.

G.R. III.
BRITISH MUSEUM



Mar.1.1808. Published by Ja.s Sowerby, London.

HYPNUM cupressiforme.

Cypress-branched Feather-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* ovate-oblong, from a lateral scaly sheath. *Outer fringe* of 16 teeth, dilated at the base: *inner* a variously-toothed membrane. *Veil* smooth.

SPEC. CHAR. Stem prostrate, pinnated. Leaves lanceolate-awlshaped, concave, ribless, curved to one side. Lid beaked.

SYN. Hypnum cupressiforme. *Linn. Sp. Pl.* 1592. *Sm. Fl. Brit.* 1331. *Hedw. Sp. Musc.* 291. *Crypt. v.* 4. 59. *t.* 23. *Huds.* 500. *With.* 858. *Hull.* 272. *Relh.* 435. *Sibth.* 298. *Abbot.* 248. *Dicks. H. Sicc. fasc.* 8. 21. *Turn. Musc. Hib.* 193.

H. crispum cupressiforme, foliis aduncis. *Dill. Musc.* 287. *t.* 37. *f.* 23.

H. repens crispum cupressiforme. *Raii Syn.* 89.

VERY common about the roots of trees and on rocks and stones in dry woods, where it forms broad elastic patches, easily separable from what they grow upon, and bearing capsules abundantly in April and May.

Stems entangled, pinnated, leafy, their branches flattened on the upper side, and hooked at the points. Leaves light shining green, often tawny, entire, without ribs, taper-pointed, closely imbricated, their points all curved to the under side of the branch. Sheaths lax. Stalks upright, red, wavy, an inch or more in length. Capsule cylindrical, a little curved. Lid convex, with a longish taper beak.

H. compressum of Linnæus's *Mantissa*, 310, *Dill. f.* 22, is a pale slender variety of this, β of *Fl. Brit.*, found in moist or shady places, but not commonly.

H. cupressiforme is an excellent moss for any kind of packing, either of roots, specimens, or any thing which requires a soft elastic covering. Many insects shelter themselves beneath it during the severity of winter.

Mar.1.1808. Publish'd by Ja.s Sowerby, London.

FONTINALIS squamosa.

Shining Scaly Water-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* oblong, lateral, enclosed in a scaly sheath. *Outer fringe* of 16 teeth, dilated at the base: *inner* reticulated.

SPEC. CHAR. Leaves imbricated, lanceolate, pointed, concave. Scales of the sheath blunt, as well as the lid.

SYN. Fontinalis squamosa. *Linn. Sp. Pl.* 1571. *Sm. Fl. Brit.* 1336. *Hedw. Sp. Musc.* 299. *Crypt. v.* 3. 32. *t.* 12. *Huds.* 467. *With.* 788. *Hull.* 275. *Lightf.* 696. *Dicks. H. Sicc. fasc.* 5. 25. *Turn. Musc. Hib.* 199.

F. squamosa tenuis sericea atro-virens. *Dill. Musc.* 258. *t.* 33. *f.* 3.

A NATIVE of alpine rivulets. Mr. Templeton sent it in July last from a little stream on the Belfast mountains.

This species is much smaller than the common one, *t.* 359, as well as of a more yellowish and shining aspect. The leaves are lanceolate, imbricated commonly in three rows, taper-pointed, without any rib, concave, not folded together. Male flowers brownish, in numerous axillary buds. Capsules elliptical, or nearly cylindrical. Lid conical, short and obtuse. Outer fringe recurved, brown: inner deep red. Lid awl-shaped. Scales of the sheath ovate, broad, rounded at the end, closely imbricated, not quite extending to the point of the capsule.——We have been obliged to copy the fringe from Hedwig, our specimens being in that point too imperfect.

FONTINALIS squamosa.

Shining Scaly Water-moss.

CRYPTOGAMIA Musci.

Gen. Char. Caps. oblong, lateral, enclosed in a scaly sheath. Outer fringe of 16 teeth, dilated at the base: inner reticulated.

Spec. Char. Leaves imbricated, lanceolate, pointed, concave. Scales of the sheath blunt, as well as the lid.

Syn. Fontinalis squamosa. Linn. Sp. Pl. 1571. Sm. Fl. Brit. 1350. Hedw. Sp. Musc. 299. Cybr. n. 3. 32. t. 12. Huds. 467. With. 788. Hall. 274. Dicks. fasc. 3. 24. Engl. 696. Turn. Musc. Hib. 199.

F. squamosa tenuis acris aero-virens. Dill. Musc. 365. t. 39. f. 8.

A NATIVE of alpine rivulets. Mr. Templeton sent it to Daly last from a little stream on the Belfast mountains.

This species is much smaller than the common one, as well as of a more yellowish and shining aspect. The leaves are lanceolate, imbricated commonly in three rows, tapering pointed, without any rib, concave, not folded together. Male flowers brownish, in numerous axillary buds. Capsules elliptical, or nearly cylindrical. Lid conical, short and obtuse. Outer fringe recurved, brown: inner deep red. Lid awl-shaped. Scales of the sheath ovate, broad, rounded at the end, closely imbricated, not quite extending to the point of the capsule.——We have been obliged to copy the fringe from Hedwig, our specimens being in that point too imperfect.

G.R. III.

Mar. 1.1806. Published by Ja.s Sowerby, London.

BRYUM annotinum.

Summer Thread-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Outer fringe* of 16 teeth, broad at the base: *inner* a toothed membrane. *Flowers* terminal. *Capsule* ovate-oblong, smooth. *Veil* smooth.

SPEC. CHAR. Stem branched from the base. Leaves ovato-lanceolate, pellucid, keeled, somewhat serrated. Capsule obovate, pendulous.

SYN. Bryum annotinum. *Hedw. Sp. Musc.* 183. *t.* 43. *Sm. Fl. Brit.* 1358. *Huds.* 490. *Hull.* 255. *Sibth.* 291. *Turn. Musc. Hib.* 123.

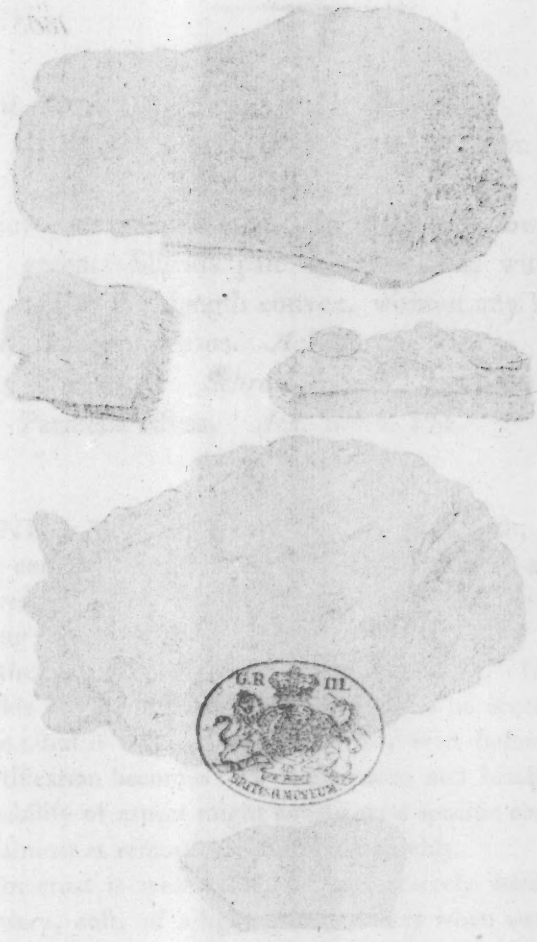
B. annotinum lanceolatum pellucidum, capsulis oblongis pendulis. *Dill. Musc.* 399. *t.* 50. *f.* 68.

Mnium annotinum. *Linn. Sp. Pl.* 1576. *With.* 805.

THIS moss is frequent enough on moist turfy ground, but very rarely indeed produces any capsules. We have gathered it in fruit once only, on Scarning common, Norfolk, in May 1780. The Rev. Dr. Abbot sent specimens from the thatch of a cottage near Bedford. The stellated male blossoms frequently occur.

The roots are probably perennial. Stems red, erect, leafy; those of the male plants simple, zigzag, with one terminal stellated blossom: those of the female ones very short, each bearing a terminal fruit-stalk, and throwing out several tall leafy simple branches from the bottom. Leaves of a bright transparent green, finely reticulated, lanceolate inclining to obovate, keeled, with a rib ending in a point, serrated in their upper part. Fruit-stalk red, wavy, an inch and half long. Capsule pendulous, pear-shaped. Lid conical, very short, pointed, reddish when ripe. Fringe pale.

As this species so rarely bears fruit, and yet so frequently occurs, we presume it to be perennial, though Dillenius seems to think otherwise. Perhaps it may generally be increased by buds, which are often borne in the bosoms of the leaves of the male plant, in which state it is the truly wonderful *Trentepohlia* of several German authors, named, as some of them inform us, after the Rev. Mr. Trentepohl.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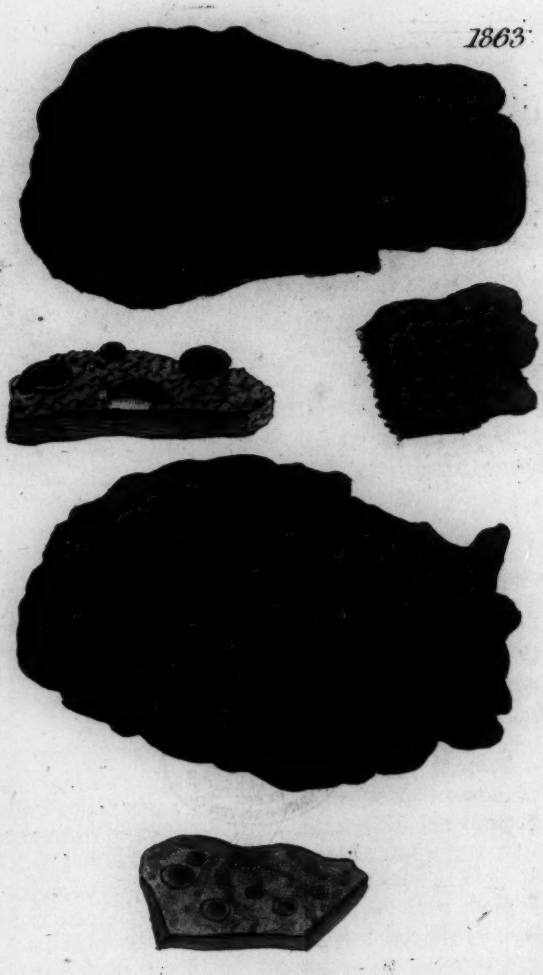


Mar. 1.1808. Published by Jas. Sowerby, London.

LICHEN effusus.

Spreading Green Lichen.

CRYPTOGAMIA Algæ.

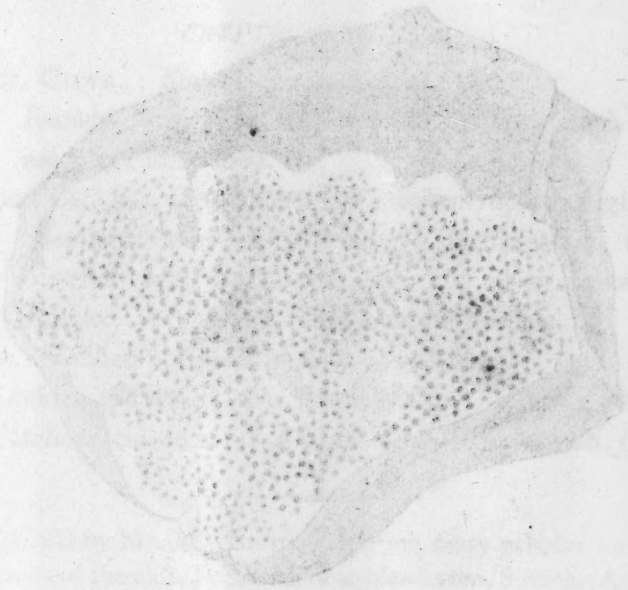
GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust indeterminate, thin, powdery, light green. Shields pale waxy brown, with a paler border; at length convex, without any border.

SYN. Lichen effusus. *Ach. Prod.* 50.
L. salignus. *Schrad. Spicil.* 84.
Parmelia effusa. *Ach. Meth.* 171.

SENT by Mr. Turner long ago from Yarmouth, where it is very common, and more recently by Mr. Lyell, and Mr. W. Borrer, from Hampshire. Our most perfect specimens with young concave shields, were found by Mr. W. J. Hooker, on the bark of firs at Cossey near Norwich. In these the shields are so transparent when wet as to be scarcely discernible; but if the specimens be dried, even before a fire, the fructification becomes very conspicuous and beautiful. This mutability of aspect might constitute a specific character, being almost as remarkable in the old shields.

The crust is widely diffused and scarcely bordered, thin, powdery, soft, of a light green, darker when wet, in which state it exhales a peculiar very fragrant scent. Shields small, scattered, sessile, when young of a pale waxy flesh-colour, concave, with a still paler elevated smooth border. The old shields are much darker, brownish, convex, and their border often disappears. We conceive this species is rather a *Lecidea* of Acharius than a *Parmelia*. It bears most affinity to *Lichen vernalis*, *v.* 12. *t.* 845.



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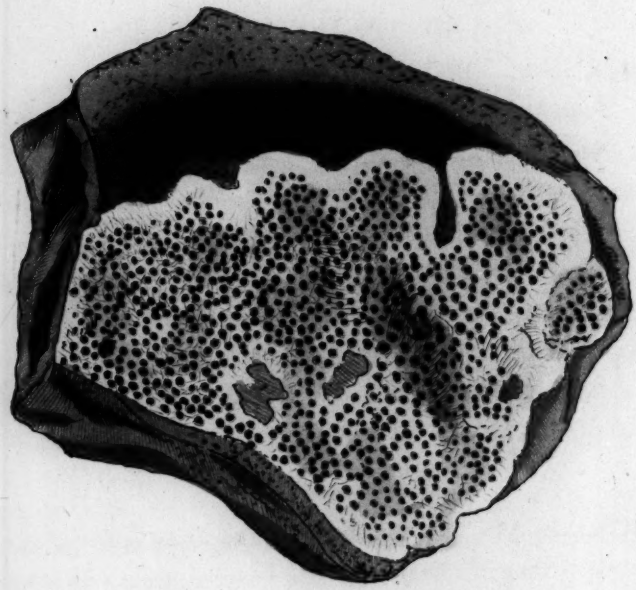
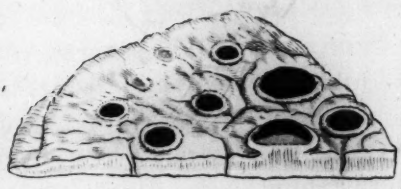




March 1808. Published by Ja.s Sowerby, London.

LICHEN speireus.

Veiled Black-shielded Lichen.

CRYPTOGAMIA Algæ.

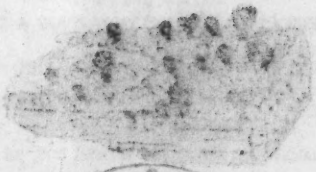
GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust tartareous, uninterrupted, slightly tessellated, very white. Young shields sessile, flat, covered with a grey bloom; old ones elevated, convex, very black, with a white border.

SYN. Lichen speireus. *Ach. Prod.* 59.
Lecidea speirea. *Ach. Meth.* 52.
Patellaria calcarea. *Hoffm. Pl. Lich. v.* 3. 5. *t.* 56. *f.* 2.

FOUND by Mr. W. Borrer, clothing flinty pebbles on the summits of the cliffs by the sea near Newhaven, Sussex. Acharius mentions it as a maritime Lichen. We know not of its being observed by any other British botanist, but doubtless it may have been overlooked for *L. ater*, or taken for *L. calcareus*, an obscure species, to which almost every black and white one has been, at some time or other, referred. Our specimens accord with those sent by Professor Acharius.

The crust is very white and chalky, spreading in uninterrupted roundish patches, with a thin white edge, not marked by any evident concentric lines. Its surface slightly tessellated when old, rugged, not mealy. Shields numerous, small; when young sunk in the crust, flat, and veiled, as it were, with a grey bloom; when old they are raised almost upon a footstalk, becoming convex, roughish, coal-black, with a thin depressed border of the substance of the crust. Hoffmann's excellent figure and description leave no doubt on our minds as to his synonym.



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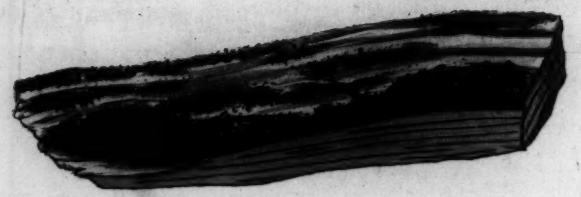


Mar. 1.1808. Published by Ja.s Sowerby London.

LICHEN microcephalus.

Minute Pin-headed Lichen.

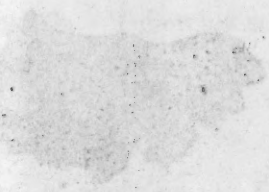
CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

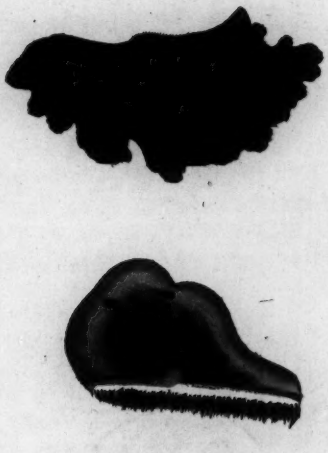
SPEC. CHAR. Crust olive-coloured, rugged. Tubercles minute, nearly globose, black and shining, on shortish black stalks; their disks flat and opaque.

DISCOVERED on oak rails at Caister near Yarmouth, in Dec. 1805, by Mr. W. Borrer, to whom we are indebted for specimens.

The crust is of a very perceptible thickness, uninterrupted, tartareous, olive-coloured, very rough and rugged, internally whitish, and we think there can be no doubt of its belonging to the tubercles, as we know no other species of *Lichen* which it precisely resembles, and it has moreover a general affinity to the crust of an Acharian *Calicium*, to which tribe the plant before us unquestionably belongs. The chief doubt arises from these tubercles being so very like those of *C. stigonellum* of Acharius, coal-black and very shining, with a flat, depressed, opaque disk; and that species is asserted to have no crust, its tubercles being found scattered over *L. pertusus*, *t.* 677, in a parasitical manner. They are moreover much shorter stalked than in our plant, otherwise it might be suspected we had now, for the first time, become acquainted with the real crust of those tubercles.



GEO. III
BRITISH MUSEUM



Mar.1.1808. Published by Ja.t Sowerby London.

LICHEN parasiticus.

Parasitical Dusky Lichen.

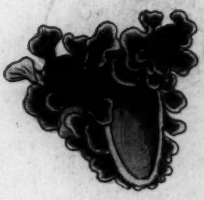
CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Fronds coriaceous, convex, rounded, lobed, copper-coloured; at length rugged: black and shaggy beneath. Tubercles scattered, sunk, minute, coal-black; at length prominent and convex.

THIS singular species, of which we can find no mention, grows parasitically, in patches or tufts, upon the fronds of *L. omphalodes*, *t.* 604, and we have therefore chosen for it the above name, which is at present unoccupied, and indeed has never before been with equal propriety given to any *Lichen*. Mr. Griffith first sent us specimens of this, many years ago, from North Wales. Mr. G. B. Sowerby found the same on Cribbath hill, near Yetraed Gynlais, South Wales, and Mr. D. Turner with Mr. W. J. Hooker gathered specimens at the foot of Ben Nevis in Scotland.

The tufts are scarcely an inch broad, and are readily distinguishable from the plant on which they grow by their lighter colour. Each of them is rounded and lobed, at first smooth and flattish, but at length tumid, convex, rugged, cracked, and partly bleached. The under surface is shaggy with dense black hairs. The fructification consists of several scattered, minute, coal-black tubercles, at first sunk in the frond, or at least on a level with its surface, but by age becoming prominent, convex, and almost globular. This should seem to belong to the Acharian genus *Endocarpon*, but the ripe tubercles are too prominent, and indeed at an early age we think we perceive the proper margin of his *Lecideæ*.



Apr. 1 1808. Publish'd by Jas. Sowerby London.

LICHEN anomæus.

Confused Brown-headed Cup Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

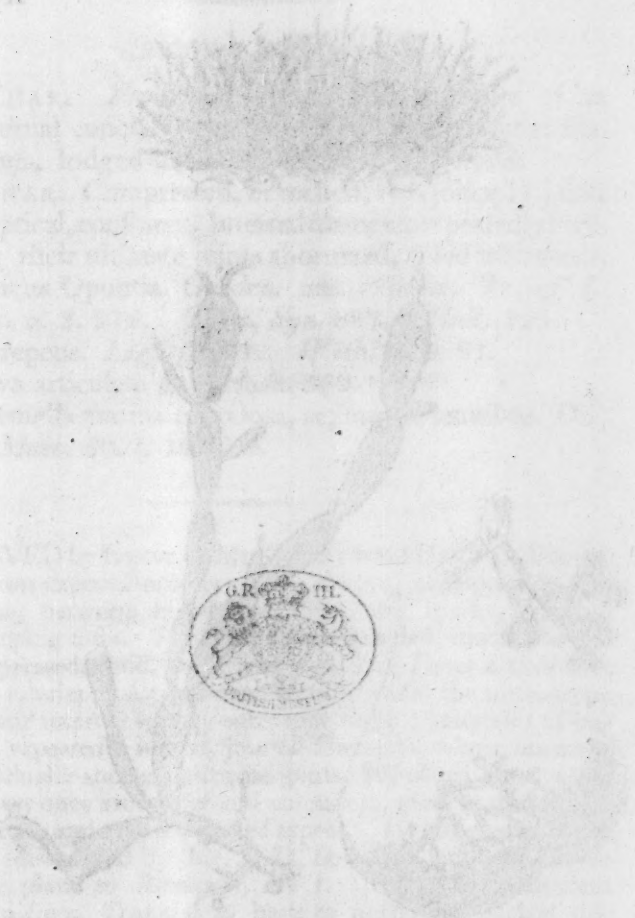
SPEC. CHAR. Cartilaginous, brittle, ash-coloured. Stems cylindrical, rough and leafy. Cups turbinate, closed; at length dilated and radiated. Tubercles marginal, sessile or stalked, brownish-black. Leaves imbricated, crenate, minute.

SYN. Lichen pyxidatus *o*. *Huds.* 554.
Bæomyces anomæus. *Ach. Meth.* 349.
Coralloides parùm ramosum, tuberculis fuscis. *Dill. Musc.* 97. *t.* 15. *f.* 20.

DILLENIUS gathered this on Woolwich heath. We found it on the Pentland hills near Edinburgh in 1782, and determined his synonym, but it is not to be found in Lightfoot. Mr. D. Turner took the specimens in our plate from the old thatch of Mr. Crowe's barn at Lakenham, in March 1803.

This is one of the most inelegant and disorderly of the cup Lichens, as well as the most brittle. Its predominant hue is ash-colour variegated with brown. The leafy crust is finely divided and crenate, white beneath; and not only the base, but mostly the stems and cups are clothed with similar foliage. Sometimes the stems are more naked, but always rough. They are generally simple, occasionally divided, terminating in rather imperfect cups, which are closed when young, then dilated and radiant, more or less overgrown with leaves. The tubercles are dark brown, almost black, either sessile among leaves on the edge of the cup, as in our figure, or raised on short irregular stalks, as in that of Dillenius.

This species is most nearly related to *L. alcicornis, t.* 1392, and but for the great authorities of Dillenius and Acharius, we should scarcely have thought it more than a variety.


G.R. III.

Apr. 1. 1808. Published by Jas. Sowerby London.

RIVULARIA Opuntia.

Indian-fig Rivularia.

CRYPTOGAMIA Algæ.

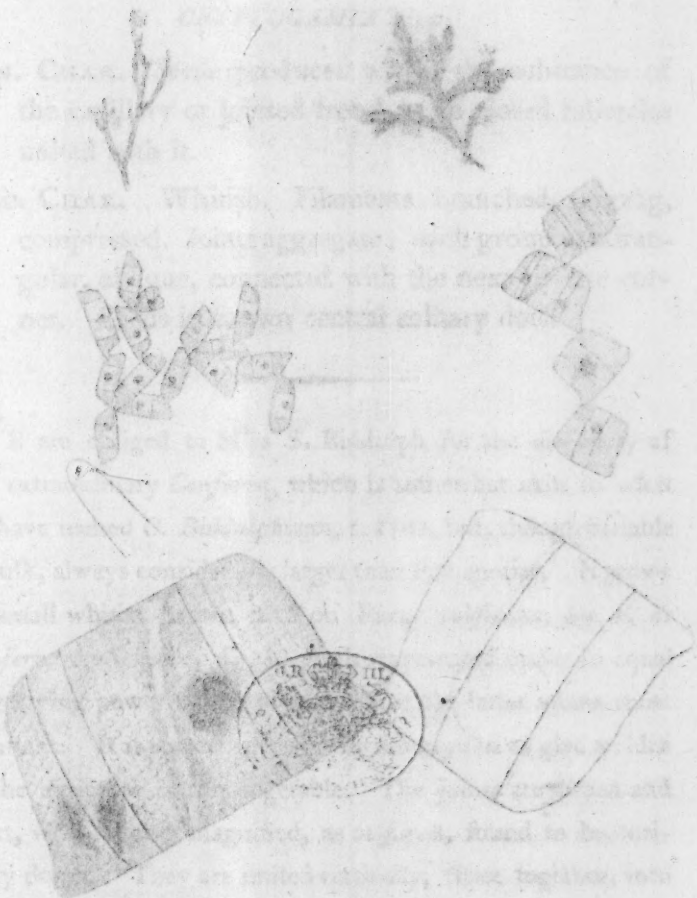
GEN. CHAR. *Frond* gelatinous, firm, destitute of an external cuticle. *Fructification* among jointed filaments, lodged in the substance of the frond.

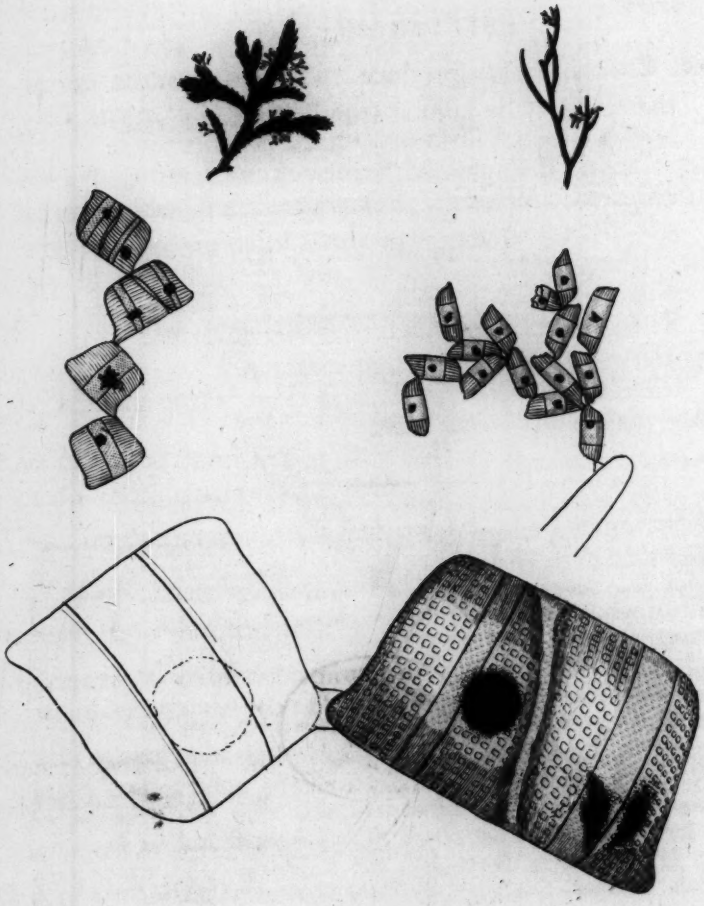
SPEC. CHAR. Compressed, branched, red, jointed; joints elliptical, confluent. Internal filaments repeatedly forked; their ultimate joints shortened, filled with seeds.

SYN. Fucus Opuntia. *Gooden. and Woodw. Tr. of L. Soc. v.* 3. 219. *Turn. Syn.* 387. *Hull.* 326.
F. repens. *Lightf.* 961. *With. v.* 4. 91.
Ulva articulata β. *Huds.* 569.
Tremella marina cæspitosa, segmentis tenuibus. *Dill. Musc.* 50. *t.* 10. *f.* 9.

RECEIVED by favour of Mr. Turner from Hastings, Sussex. It grows on exposed marine rocks, always, according to that gentleman, between high- and low-water marks, forming small creeping tufts. The fronds are entangled, much branched, compressed, solid, or at least not, like *Fucus articulatus*, *t.* 1574, tubular. A transverse section under the microscope shows their internal spongy substance to be a congeries of horizontal, repeatedly forked, jointed filaments, whose innumerable, gradually shorter, ultimate joints, full of red juice, while the primary ones are longer and colourless, meet at the surface of the frond, and give it a dotted aspect. Its curious structure was first discovered by Mr. J. D. Sowerby, and leads us to refer the plant to *Rivularia*, see *t.* 1818. The excellent writers in *Linn. Trans. v.* 3, have so nearly approached this discovery as to inform us that "the uppermost joints perform the office of tubercles (with respect to *Fuci* in general) and are pregnant with extremely minute crowded seeds." Whether these seeds be more numerous, or more perfect, in the lateral warts, observable in our specimen on some of the upper joints, one of which is cut across in our magnified section, we cannot accurately say.

We must remark that *Fucus Wigghii*, *t.* 1165, proves on more accurate examination to be a true *Rivularia*, the account of its seeds hitherto given being incorrect.





Apr. 1.1808. Published by Jas. Sowerby London.

CONFERVA obliquata.

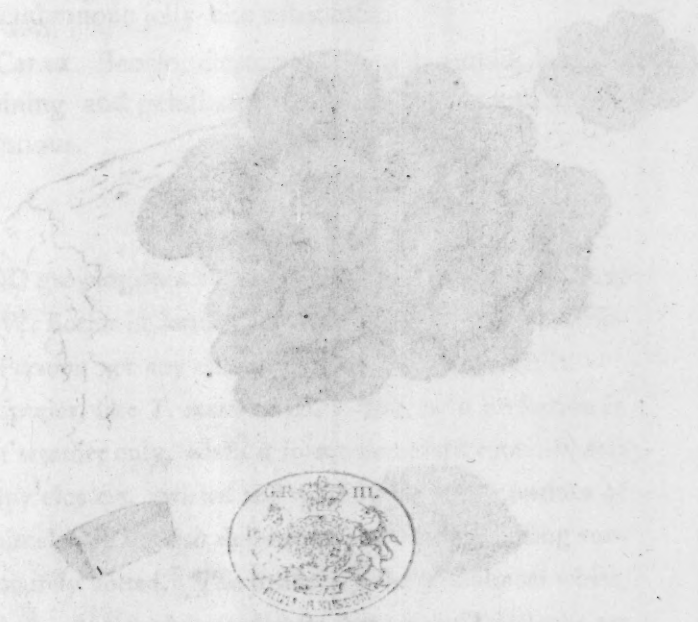
Oblique Disjointed Conferva.

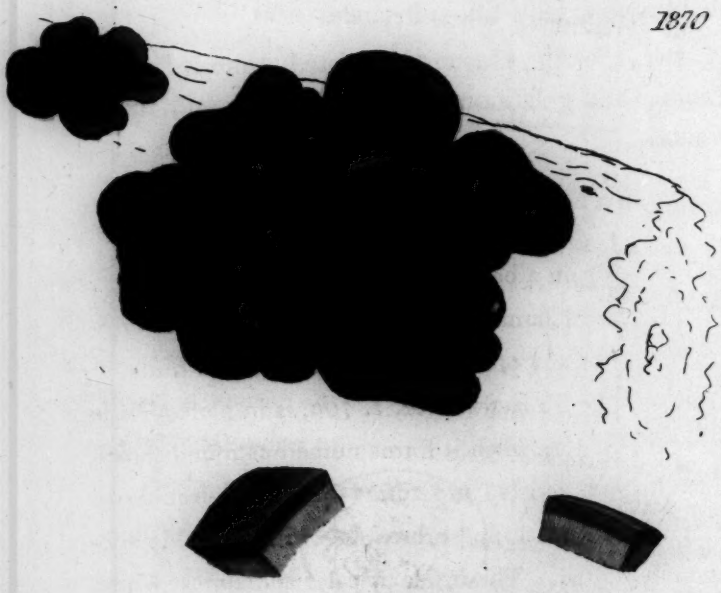
CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

SPEC. CHAR. Whitish. Filaments branched, zigzag, compressed. Joints aggregate; each group quadrangular, oblique, connected with the next by one corner. Seeds in brown central solitary dots.

WE are obliged to Miss S. Biddulph for the discovery of this extraordinary *Conferva*, which is somewhat akin to what we have named *C. Biddulphiana*, *t.* 1762, but, though variable in bulk, always considerably larger than that species. It grows in small whitish-brown tufts on *Fucus subfuscus*, *fig.* 1, or *Conferva verticillata*, *fig.* 2, both represented under an equal magnifying power in our plate, so that the latter seems most luxuriant. It is scarcely possible by description to give an idea of the structure of this vegetable. The joints are broad and short, when highly magnified, as at *fig.* 3, found to be curiously dotted. They are united vertically, three together, into obliquely quadrangular groups, which latter are in like manner sometimes combined vertically, but most frequently by their opposite corners, so as to form a kind of zigzag chain, and this moreover sends off frequent ramifications. About the centre of each group is a round mass of brown seeds, visible to the naked eye.





Apr. 1. 1808. Published by Jas. Sowerby, London.

TREMELLA intumescens.

Brown Tumid Tremella.

CRYPTOGAMIA Algæ.

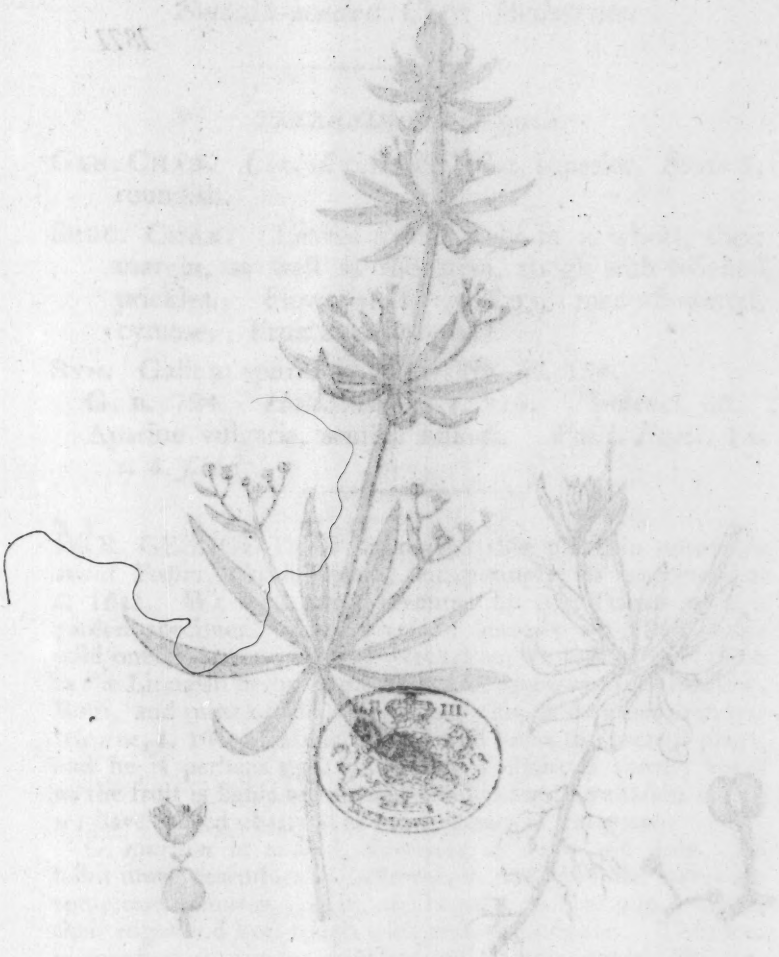
GEN. CHAR. *Fructification* scarcely perceptible, in a membranous jelly-like substance.

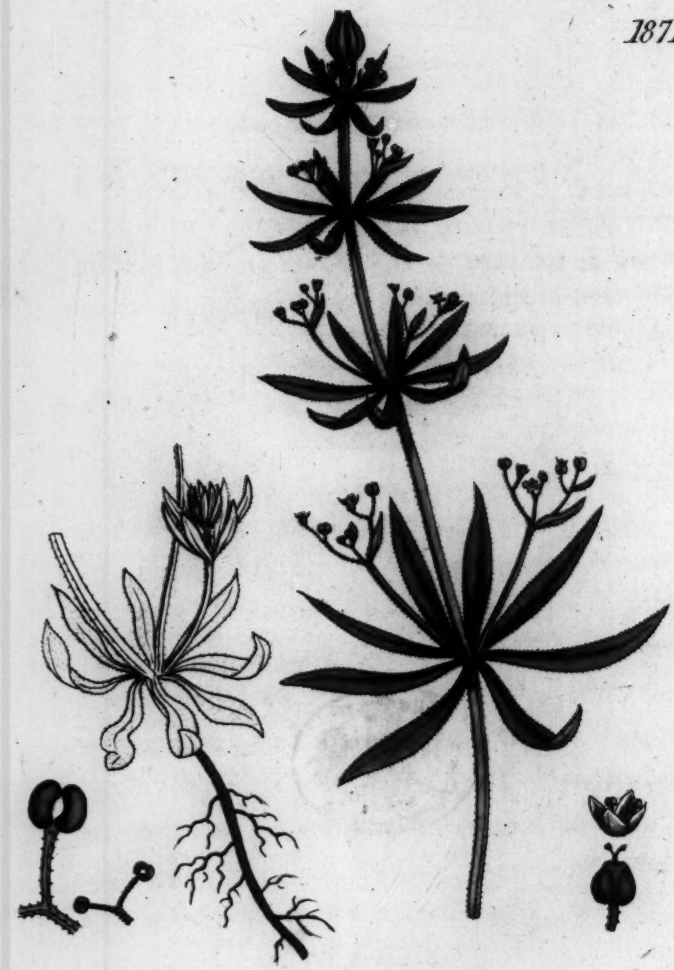
SPEC. CHAR. Sessile, clustered, twisted, tumid, brown, shining and gelatinous; when dry, thin and membranous.

FOUND growing on a beech in St. Leonard's forest, Sussex, by Mr. W. Borrer in January 1807. We can find no description in Persoon nor any other author that accords with it.

This species, like *T. mesenterica*, *t.* 709, is in perfection in very wet weather only, when it forms numerous roundish soft and pulpy clusters, twisted and tumid like the intestines of some animal, of a darkish dull brown, but with a shining surface obscurely dotted. The inside is paler and almost white, except that, when cut longitudinally, brown vertical streaks are observable near the surface, in which one would suspect the seeds to be lodged. When dry the whole plant becomes a thin membrane.

It is difficult in some cases to draw the line between the Cryptogamic orders of *Algæ* and *Fungi*, but the former are commonly more durable, and especially completely revivescent on the application of moisture. This last circumstance, added to the affinity of *Tremella* to *Lichen*, induces us to dissent from the ingenious Mr. Persoon, who ranges it with the *Fungi*.





Apr. 1.1808. Publish'd by Jn.o Sowerby London.

GALIUM spurium.

Smooth-seeded Corn Bedstraw.

TETRANDRIA Monogynia.

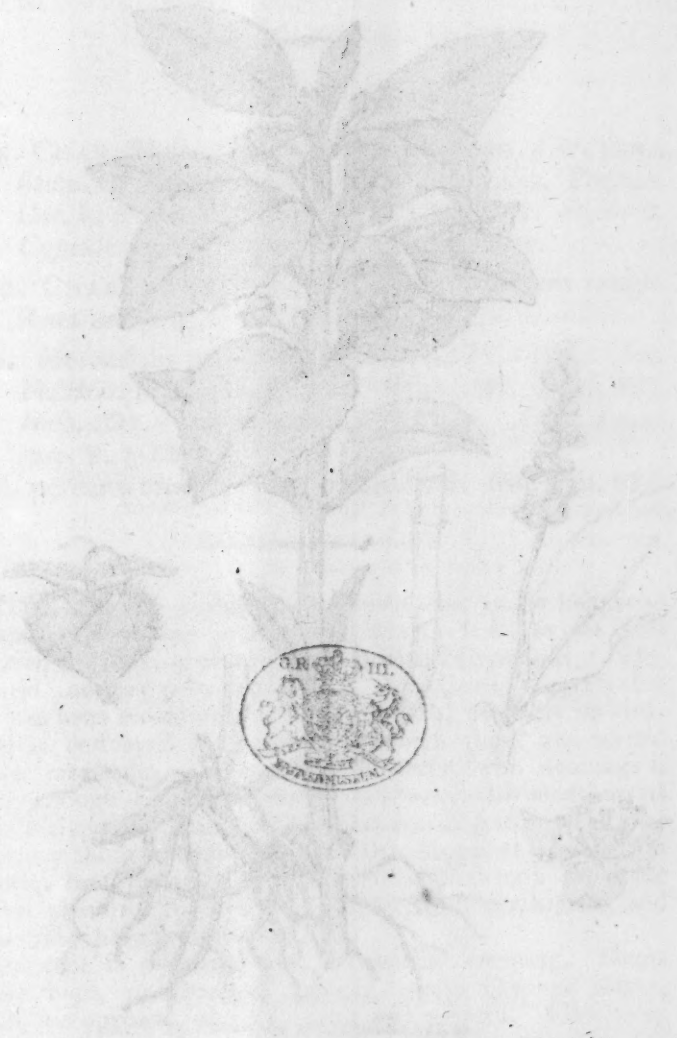
GEN. CHAR. *Cor.* of one petal, flat, superior. *Seeds* 2, roundish.

SPEC. CHAR. Leaves about eight in a whorl, their margin, as well as the stem, rough with reflexed prickles. Flower-stalks axillary, many-flowered, cymose. Fruit smooth, erect.

SYN. Galium spurium. *Linn. Sp. Pl.* 154.
G. n. 724. *Hall. Hist. v.* 1. 318. *Nomencl.* 66.
Aparine vulgaris, semine minori. *Vaill. Paris.* 14. *t.* 4. *f.* 4?

MR. GEORGE DON discovered this plant in cornfields about Forfar, North Britain, but sparingly, as mentioned at *t.* 1641. We have been favoured by Mr. Turner with a garden specimen, which precisely accords with Mr. Don's wild ones, whence our seeds were taken, as well as with those in the Linnæan herbarium. Yet the *G. spurium* of Willdenow, Roth, and most of the authors they cite, is no other than our *tricorne*, *t.* 1641. Haller indeed well knew the present plant, and he is perhaps right in quoting Vaillant as above; but if so the fruit is liable to be occasionally hairy, a variation which we have indeed observed in other species of the genus.

G. spurium is annual, flowering in June and July. Its habit much resembles *G. Aparine*, *t.* 816, but the leaves are sometimes shorter. They are from 6 to 8 or 9 in a whorl, their edges and keel rough with recurved prickles. The stem is rough with similar prickles, and quadrangular. Flower-stalks axillary, opposite, rough, corymbose, each bearing 6 or 7 green flowers, all more or less fertile, accompanied with 1 or 2 floral leaves. Germen quite smooth. Ripe fruit of 2 brown kidney-shaped lobes or seeds, with a central cavity between them; their surface smooth and even, except a slight ruggedness which seems to be caused by drying only. The fruitstalks are upright or spreading, not curved downward.—*Valantia Aparine* of Linnæus, *Galium verrucosum* of *Prod. Fl. Græc.* 93, has the prickles of its leaves directed forwards, the fruit coarsely tuberculated, and recurved.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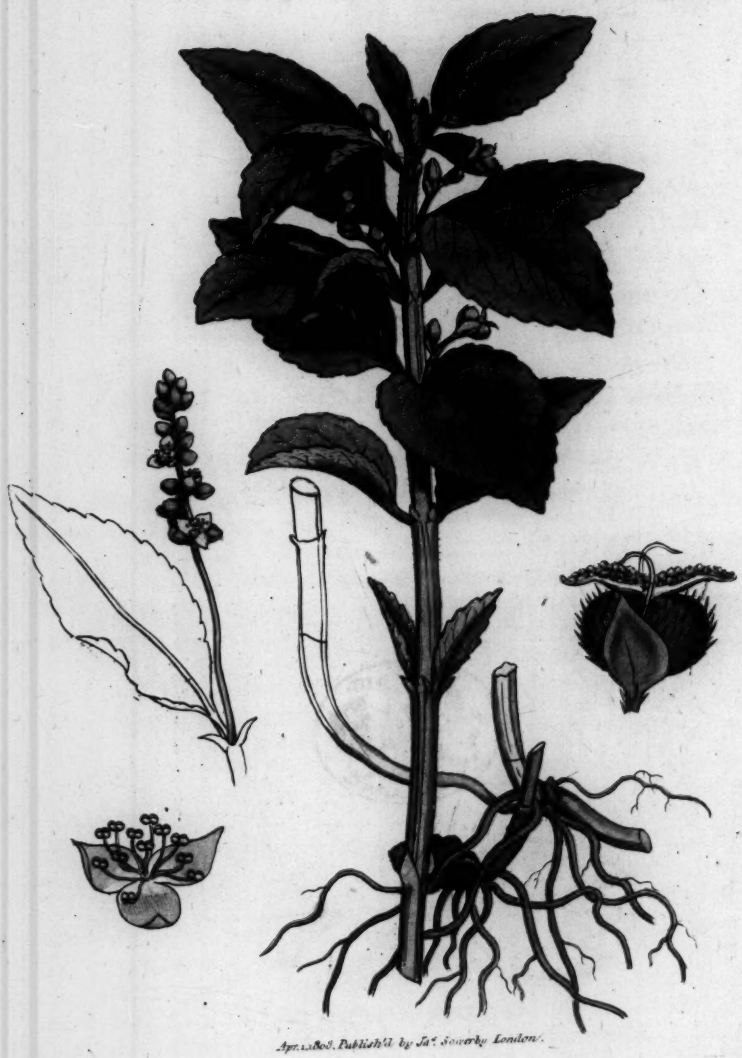

Apr. 1.1808. Published by Jas. Sowerby London.

MERCURIALIS perennis.

Perennial Mercury.

DIOECIA Polyandria.

GEN. CHAR. Male. *Cal.* in 3 deep divisions. *Cor.* none. *Stam.* 9 to 12. *Anthers* of 2 globose cells. Female. *Cal.* in 3 deep divisions. *Petals* 2, linear. *Styles* 2. *Capsule* double, 2-celled. *Seeds* solitary.

SPEC. CHAR. Stem perfectly simple. Leaves rough. Root creeping.

SYN. Mercurialis perennis. *Linn. Sp. Pl.* 1465. *Sm. Fl. Brit.* 1083. *Huds.* 435. *With.* 392. *Hull.* 222. *Relh.* 391. *Sibth.* 133. *Abbot.* 216. *Curt. Lond. fasc.* 2. *t.* 65.

M. perennis repens, Cynocrambe dicta. *Raii Syn.* 138.

VERY common among trees, bushes and under hedges in the spring, flowering in April and May. It is, as we have observed in speaking of the other British *Mercurialis*, *t.* 559, a fœtid and very poisonous plant. Mr. Curtis suggests that as it has been recommended for a pot herb, probably its virulence is destroyed by boiling, of which there are several similar examples. Dioscorides, however, who describes it clearly enough under the name of Λινοξωστις, still mentions its purgative quality when boiled, and we do not think it promises any thing to counterbalance the danger of its use. It has often been remarked that the old botanists took the male of this plant for the female, which error Theophrastus and Dioscorides have promulgated.

The root is perennial and extensively creeping. Stems a foot high, unbranched, angular, rough like the leaves, which are opposite, stalked, ovate and serrated. Flowers in axillary spikes, green. Petals (rather than nectaries) in the fertile flowers only, of a narrow linear form, which we omitted to mention in the *M. annua*, but which, as constituting a difference of structure between the two blossoms, are of importance with regard to classification. See *Introduction to Botany*, 482.

G.R. III.
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